



FRIDAY, JANUARY 30, 1880.

January Meeting of the Joint Executive Committee.

The following is an abstract of the official report of the meeting of the Joint Executive Committee in New York, Jan. 20, 21 and 22, concerning which a very brief statement was made last week:

The following remarks were made by Mr. Albert Fink, the chairman:

MR. FINK'S ADDRESS.

"The subjects for your consideration, according to the call for this meeting, are as follows:

"1. Revision of percentage table, as per resolution passed at Chicago (see proceedings, page 81).

"2. Revision of tariff to New England interior points.

"3. Tariff from the West to South Atlantic ports via Northern ports. A petition of Western roads will be read when this subject is reached, which will show the questions that are raised.

"4. Adjustment of tariff to European ports via different Atlantic ports. I fear that this matter cannot be finally adjusted, as I have not yet received all the statements called for by the Chicago meeting.

"5. Changes in classification. The Classification Committee has made a report recommending certain changes. Requests for additional changes have been received, which will be submitted to that committee.

"In addition to the subjects mentioned in the call, the following will have to be considered:

"6. Application has been made for a reduction in the rates on live hogs. Parties representing this interest in Boston, New York and Jersey City are here and wish to be heard.

"7. Application for a reduction in rate on bullion.

"8. Some irregularities have occurred in regard to the division of cotton rates from Memphis via Cairo, and also as to the division of cotton at Memphis, which may lead to a break in the cotton rates. This matter will have to be adjusted by this meeting.

"9. A specific charge has been preferred against the National Dispatch Line of making lower rates via Boston to European ports than the inland rate with the ocean rate added. I have requested the agents of terminal lines and foreign freight agents at Chicago to collect all the facts, as far as known, regarding this charge, and their report will be submitted to this meeting for further investigation. This is the first specific charge of the nature submitted to this Committee, and should be made the occasion of adopting some settled rule of action, in accordance with which all similar cases shall hereafter be dealt with. The question arises, and will have to be settled by this convention: What step shall be taken for the protection of those members of the Committee willing to adhere to the agreed rates? This Committee stands pledged by its action in meeting of Sept. 23 to put all shippers in the same place upon the same footing, and to prevent, by all possible means, the re-introduction of the special contract and rebate system, and the members of the Committee are in honor bound to adopt the most effective means to carry out this agreement.

"Since the last monthly meeting, the following companies have declared their intention to be represented on the Joint Executive Committee:

"The Louisville & Nashville, the Cairo & Vincennes and the Detroit, Lansing & Northern railroads.

"I suggest that the Committee now consider the different subjects, in the order just mentioned."

BASIS OF DETROIT AND TOLEDO RATES.

The resolution that "The percentage table of June 23, 1879, be abrogated, and that the percentage table of April, 1876, be adopted instead," introduced at the December meeting, was referred to a committee, consisting of Messrs. Seargeant, Grier, Spriggs, Vilas, Gray, Smith, Clark, Thomas, Taylor, Griffiths, Vaillant and Cochrane, which heard representatives from Toledo and Detroit, and on the second day of the session presented the following majority and minority reports:

Majority Report.

"After a full discussion of the subject, and hearing the arguments of representatives from the boards of trade of Detroit and Toledo, it was found that a unanimous report could not be submitted.

"The following resolution was offered and lost by vote of 8 to 3:

"Resolved, That no change be made in the existing basis of adjusting east-bound rates."

"The following resolution was carried by vote of 7 to 4, and expresses the views of a majority of the committee:

"Resolved, That rates from Toledo, Detroit, Port Huron and Cleveland, on grain, flour, and fourth class to Eastern cities, be based on the percentages of Chicago rates, established April 13, 1876, viz.: Toledo, Detroit and Port Huron, 75½ per cent., and Cleveland, 65 per cent. of Chicago rates to New York."

Minority Report.

"The minority of the committee appointed to consider the resolution offered at Chicago meeting for re-adoption of basis for adjusting east-bound rates, adopted April, 1876, superseded by basis made effective June 23, 1879, beg leave to report that, in their opinion, no change in the adjustment, involving reductions from any point, should be made; that no conclusive reasons have been advanced by any member of the committee, or by the persons who appeared before the committee representing the cities of Toledo and Detroit.

"The existing percentages for adjusting rates are based upon the assumption that the terminal expenses equal 6 cents per 100 lbs. If it is admitted that a mileage basis is the correct one for adjusting rates, there can be no injustice in assuming that the terminal expense on business from Detroit and Toledo to the seaboard is 6 cents per 100 lbs. so long as the same assumption is applied to business from Chicago to same points. If, however, it is assumed that rates should be adjusted to meet competition, it can be shown that the existing basis is one that complies with this, so long as the rates from Chicago to the seaboard are adjusted to meet water competition, the difference in rail rates from Toledo and Detroit, and from Chicago, being always greater than the difference in lake rates from same points; it follows, then, that when rates from Toledo and Detroit are too high to compete with the lake rates, they must also be too high to compete from Chicago, and the rail lines are simply in the position of ignoring lake competition from Toledo and Detroit while doing so from Chicago. It is evident

to all that the pressure for a modification of the rates in favor of Toledo and Detroit is simply local; an attempt on the part of the grain merchants of those points and the roads locally interested to, in effect, induce the trunk lines to transport their property at practically less rates than are received on traffic from other points, including Chicago. This is undeniable, if the attempt of the parties interested, for the adoption of the rates from Toledo and Detroit on basis of 75½ per cent, is conceded, as the terminal expense at New York is actually deducted from the through rate before dividing the revenue derived, and the net rate per ton per mile must, therefore, be less upon this traffic than upon traffic from Chicago, based upon agreed distances.

"In view of the large revenue involved in this question, the minority of the committee respectfully recommend that no action be taken without careful deliberation, not only by members of this committee, but by the chief executives of the trunk lines, and that, therefore, this committee defer final action, and the reports be referred to the presidents for their consideration. No necessity exists for immediate action, the demands for concessions being based upon water competition, which is not now in active operation."

Mr. Gray offered a substitute for the majority report, in which the basis of the rates at the points in question was made the Chicago rate with an allowance of 8 cents per 100 lbs. for terminal charges, instead of 6 cents as by the existing basis. This came up on the morning of the third day's session, and was lost by a vote of 9 to 17. On motion of Mr. Cassatt, the following was adopted by a vote of 23 to 4:

"Resolved, That the rates from Cleveland, Port Huron, Toledo and Toledo be fixed upon the basis adopted in 1876—Toledo, Detroit and Port Huron, 75½ per cent.; Cleveland, 65 per cent.; and that the rates from interior points within the Chicago division shall continue to be fixed upon the present basis, until otherwise ordered by this committee. The change from the above-named lake ports to take effect at a date to be fixed at a future meeting of this committee—not later, however, than March 1."

The Chairman stated that, under Article 12 of the organization, if any question fails to receive the unanimous action of this committee, such question shall be referred to the Chairman, whose decision shall have the same force as a unanimous vote. Accordingly he would vote for the adoption of the measure, but his decision was not final, and the parties opposed to it have the right to submit it for final decision to the Board of Arbitration, as provided for in Article 27 of the organization.

Authority was obtained by telegraph to withdraw three of the negative votes in the course of the day, and the only negative left, which subjects the question to arbitration, was that of the Atlantic & Great Western.

NEW ENGLAND ARBITRARIES.

The report of the Committee on New England Arbitrariness was read by Mr. Hayden, as follows:

"The committee, being unable to agree, present two reports, as follows:

First Report.

"1. That, to all points on the direct Boston route of each of the trunk lines, Boston rates be named, to be used only by the direct line on which the point is situated, except as provided by paragraph second.

"2. That certain prominent points, off or on the direct route of any or all of the trunk lines' Boston route, be designated to take Boston rates.

"3. That, to all other interior New England points, reached only by arbitrariness from any or all of the trunk lines' Boston direct routes, the lowest minimum local charge from the point of departure from the trunk lines' Boston route be ascertained, and that this local charge be then added to the Boston rate, the sum becoming the established rate to such local interior point open to all trunk lines at their discretion.

"Messrs. Vilas, Parker and Griffiths voting yea.

"Messrs. Millis, Clark and Hayden voting no."

Second Report.

"That Boston rates shall be quoted and allowed by no line or route to any points not reached by it, on a *pro rata* basis, or with Boston divisions based on a *pro rata*, and the rates quoted and charged by any line to such points shall be the sum of the Boston or New York rates, and the arbitrariness charged to those points from such Boston or New York rate points, as it may select.

"Messrs. Millis, Clark and Hayden voting yea.

"Messrs. Vilas, Griffiths and Parker voting no."

Mr. Seargeant moved that, inasmuch as the committee were not unanimous, the subject be recommitted for further consideration. Carried. The second day of the session it came in and reported that it wanted further time and promised to report at the February meeting.

NO CHANGE IN EAST-BOUND RATES.

A resolution announcing that it was regarded inexpedient and undesirable to make any change in the existing east-bound rates was unanimously adopted.

INVESTIGATION OF CHARGES OF CUTTING RATES.

Mr. Blanchard moved that a committee be appointed to examine into the alleged cutting of rates by the National Dispatch Line, or by any other line; and that it report to this meeting the next day whatever proof may be in their possession regarding such charges, and generally all other similar charges, which resolution was adopted, and the following committee appointed: Messrs. Newell, Ledyard, Smith, Stewart, Rutter, Blanchard, Creighton, Seargeant, Millis, Spiggs, Taylor and Hayden.

The next day the committee submitted the following report:

"No charges were made at its session except against the National Dispatch Line; and the officers of the Grand Trunk and Central Vermont companies having given assurance that they will state to the full Committee that, in the future, their companies severally and jointly agree to maintain rates, and to govern and be responsible for the acts of all agents working via their lines, your committee respectfully recommends that no further action be had at this meeting; and for the additional reason that the evidence, which is not now complete, will be submitted in full by the officers of those companies to the Commissioner in response to a resolution of your committee to that effect."

On motion, the report was adopted and the committee discharged.

Mr. Millis said that no one more regretted than himself the charges made against his line; that he and Mr. Seargeant had telegraphed to their Western agents to avoid all causes for complaint in the future, and that they did not desire to be breakers of the peace.

Mr. Seargeant said, later in the day, that he desired to supplement the statement already made in his absence by Mr. Millis. He would volunteer to state that the Grand Trunk Railway has no desire—has no intention, to violate the compact existing between the roads represented on this Committee, or, so far as they can control rates, in any sense break them, or to be a party to breaking them. His company intended to act in a conservative policy, and they would carry out the report as it is written.

RATES TO SOUTH ATLANTIC PORTS.

Tuesday, the consideration of the "Tariff from the West to South Atlantic Ports, via Northern Ports," was referred to the Trunk Line Executive Committee, to be reported upon as soon as practicable.

Thursday, Mr. Stahlman read a communication from a number of Western railroads, relating to the adjustment of rates to South Atlantic ports, via Northern ports, claiming that the short all-rail lines should have the right to make the rates, and that the lines via the North Atlantic ports should conform to such rates, allowing such difference in rates as may be agreed upon on account of insurance, etc.

A communication was read from A. Pope, General Freight Agent of the Atlantic Coast Line, asking for an opportunity to be heard on the subject before taking action.

After discussion, it was agreed that the rates remain as at present until Feb. 1, and that any adjustment of the rates that may be agreed upon by the Southern Railroad and Steamship Association, to take effect on that day, will be satisfactory to the Joint Executive Committee.

COTTON RATES FROM MEMPHIS.

The question of cotton rates and the alleged cut on shipments of cotton from Memphis by the Cairo & Vincennes road was taken up the first day and referred to the following Permanent Committee on Cotton Rates: Messrs. Cochrane, Stahlman, Martin, Pennington, Simpson, Ripley, Gays and Geiger.

This committee submitted the following report Wednesday:

The Chairman explained that the Cairo & Vincennes Company, which is not represented at this meeting, acknowledged that they had allowed only 47 cents as the proportion of through rates from Cairo to New York on Memphis cotton, instead of 49 cents, but that they had maintained full rates from Memphis, and claimed that the division of the rate between Memphis and New York did not affect the through rate; they were obliged to make the change because it was not possible to get cotton carried from Memphis to Cairo for six cents—the proportion of the through rate if 49 cents is charged from Cairo to New York.

They also claim that similar reductions in the proportion of cotton rate from Cincinnati and Evansville to New York had been made, and this is not denied. The whole difficulty seems to have arisen from the fact that the Cairo & Vincennes road was not living up to the agreement to divide the Memphis cotton as this agreement is understood by the other lines. The connecting lines of the Cairo & Vincennes Railroad are interested in seeing that this agreement is carried out, otherwise the rate from Memphis will be cut by the Southern lines not represented on this committee, and the trunk lines and all their connections will be involved in the results. The remedy is to have the Cairo & Vincennes road carry out the agreement alleged to have been made, and if any difficulties or misunderstanding of any kind have arisen about the nature of this agreement, to have them settled by arbitration if they cannot be otherwise settled.

After further discussion, the subject was referred back to the committee for further consideration.

REVISION OF LIVE-HOG RATES.

The Chairman stated that representatives from New York and Boston desired to be heard on the subject of rates on live hogs to New York and Boston and appointed the following committee to confer with the parties desiring to be heard: Messrs. Millis, Blanchard, Rutter, Gray, Hayden, Griffiths, Ledyard, Newell, Seargeant, and the representative of the Wabash.

The committee reported the same day that they had given a hearing to the parties interested, and asked further time, which was granted.

REVISION OF RULES OF COMMITTEE—ADDITIONAL OFFICE ACCOMMODATION AND ASSISTANCE.

On motion of Mr. Blanchard, it was

"Resolved, That a committee of five be appointed to report at the next meeting of this Committee, upon a revision of the present rules of the Committee, and prepare by-laws for the more careful conduct of the business of this Committee; that the Chairman be authorized to select an assistant, to be paid by the Committee, and that he inquire into and report at the next meeting whether any change in the locality for the meetings of this Committee can be made, the present accommodation not being sufficient."

In accordance with the foregoing resolution, the following committee was appointed: Messrs. Blanchard, Rutter, Cassatt, King and Seargeant.

An application for a change in the rate on bullion and the question of icing refrigerator cars as affecting the classification were referred to the Classification Committee.

An application for reduced rates on passengers and freight to the Miller's International Exhibition in St. Louis was respectfully refused.

A proposition to settle the classification of whiskey at this, instead of the next meeting, was voted down.

WEST-BOUND RATES VIA NEW LONDON NOT MAINTAINED.

Mr. Blanchard addressed the Convention on the subject of reduced rates from New York to the West via Portland and New London. He said that it was impossible to continue this state of affairs without involving other lines. He desired the matter taken into consideration, in view of the conservative policy expressed by Messrs. Millis and Seargeant, and hoped that they would do the same in regard to west-bound as on east-bound traffic.

Mr. Seargeant explained at length the position of his company in respect to the traffic via Portland and New London, declaring his willingness to submit the question as to what amount of traffic his company should be entitled out of New York to arbitration, and to so shape his proceeding that there should be no complaint against his company. As regards the New London route, he had no control over it.

After further discussion, the following resolutions were adopted:

"Resolved, That the rates being made from New York westward via New London and Portland, less than the all-rail rates, are contrary to, and subversive of, the agreements for the organization of this Joint Executive Committee, of which the Vermont Central and Grand Trunk companies are members, and that the Commissioner call upon those companies to maintain the agreed tariff all-rail rates by those water routes, as the Erie, Baltimore & Ohio and Pennsylvania railroads now maintain all-rail rates from Boston westward, via their several water lines, and that the Commissioner lay before the Trunk Lines Executive Committee the results at the earliest practicable date.

"Further resolved, That the Joint Executive Committee hereby refer this matter to the Trunk Lines Executive Committee for such action as may be deemed necessary."

FOREIGN FREIGHT RATES TO BE THE SAME, VIA ALL PORTS.

On motion of Mr. Rutter, it was

"Resolved, That the principles laid down by the presidents of the trunk lines in their agreement of April, 1877, to the effect that rates from common points of shipment to European ports should be the same through all the sea-board ports of the trunk lines, be put in force, and that the Trunk

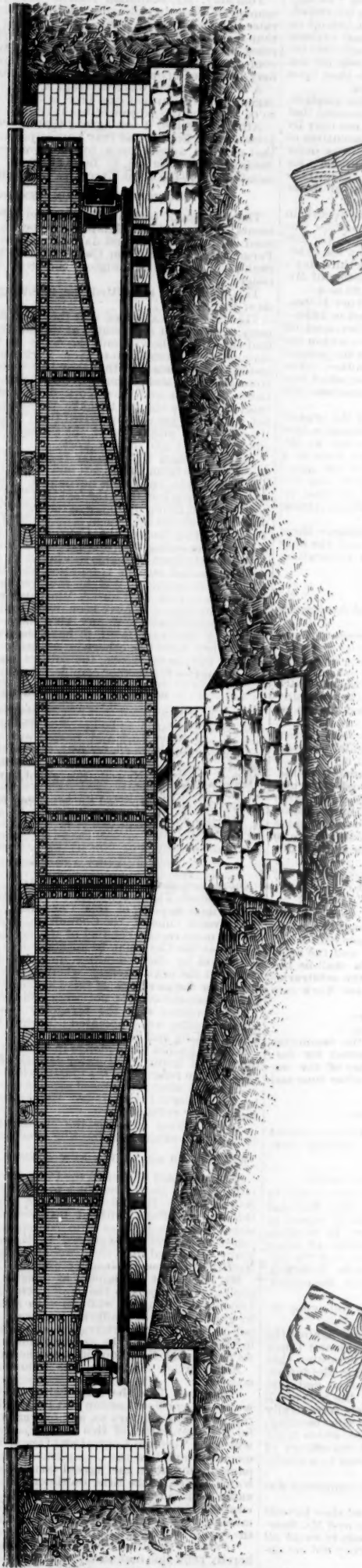


Fig. 1.

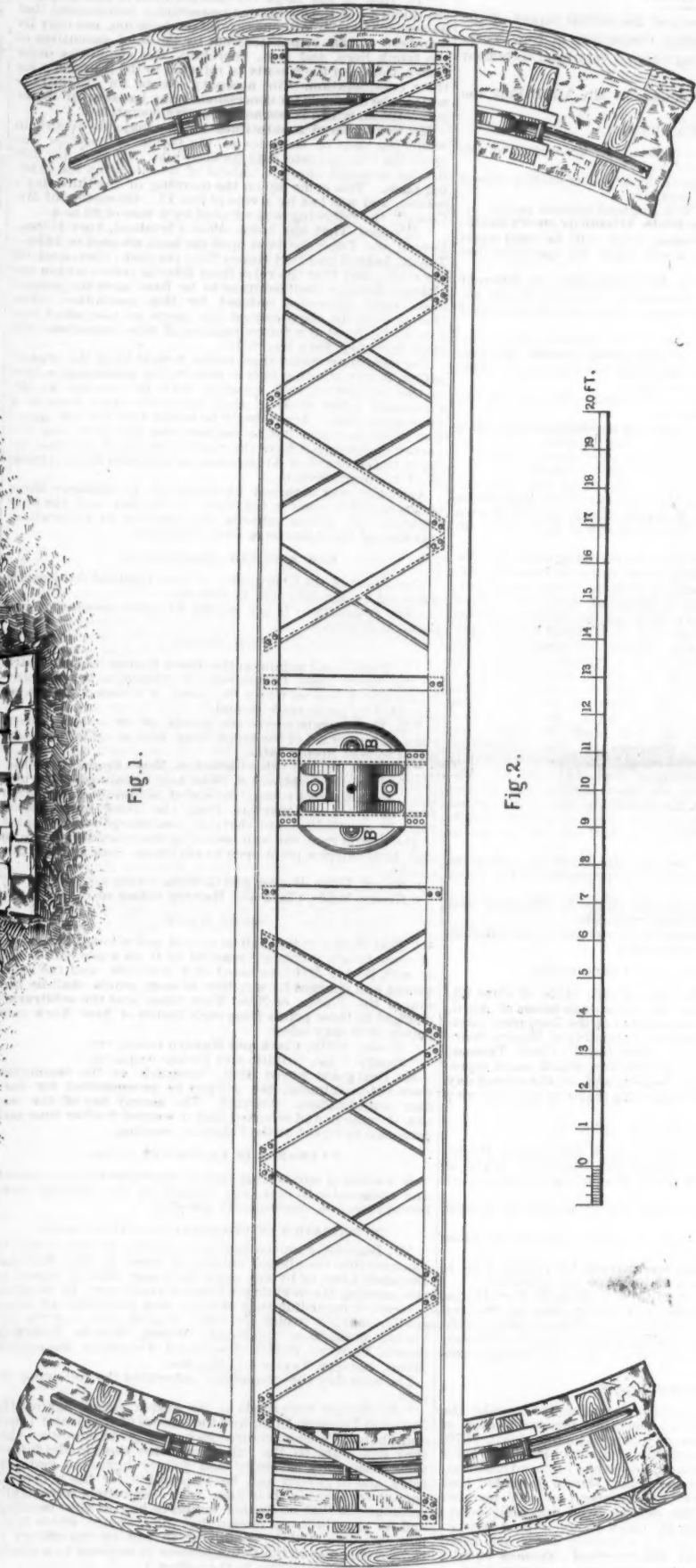
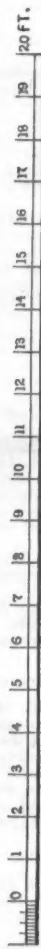


Fig. 2.



IMPROVED WROUGHT-IRON TURN-TABLE

Built by the Passaic Rolling Mill Company, Paterson, N. J.

Line Executive Committee be requested to carry the same into effect at the earliest possible day."

PERCENTAGE FROM ASHLAND AND BEARDSTOWN TO BE FIXED.

Mr. Thomas offered the following resolution, which was adopted:

"Resolved, That a committee, consisting of a representative of the Baltimore & Ohio, the Indianapolis & St. Louis, the Pennsylvania Company, the Cleveland, Columbus, Cincinnati & Indianapolis, the Michigan Central, Atlantic & Great Western, and the Lake Shore, shall immediately make a schedule of percentages, to apply to Ashland, Beardstown, Illinois, and such other points as may not be upon the existing schedule, but which do or may affect through rates from Mississippi River points, or points west thereof; and also in cases where arbitrary rates are made under the agreement of the Illinois roads, the arbitraries should be so arranged as to make rates by all lines equal.

"The percentages and arbitraries should be at once promulgated by the Chairman of the Joint Executive Committee."

Improved Wrought-Iron Turn-Table.

The engravings represent a turn-table built by the Passaic Rolling Mill Company, of Paterson, N. J. Although the design shows no great novelties, it is claimed to possess several good features which show and have shown its excellent fitness for the performance of its work.

The table is entirely centre-bearing and rests on steel segments, A, fig. 3, six inches in diameter, which offer very little resistance to turning around, and at the same time they give ample bearing surface to maintain the parts in good working order.

As the friction acts on a lever 3 in. long, and the power on one whose length is equal to the radius of the turn-table, it is apparent that very little power will be required to turn

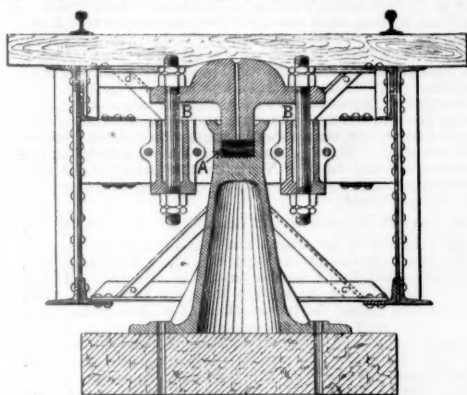


Fig. 3.

it. The table is hung to the centre-pin by two bolts, B B', made of rolled iron. This arrangement, it is said, prevents any uneven distribution of the load produced by tightening of the bolts, such as is liable to be produced when more than two are used.

The shape of the girder is such as to approach in the nearest practicable manner the theoretical form which requires a constant flange section, when due regard is taken to the influence of the strains at any point of either flange, according to the position of the engine. The flanges are made of 4 x 6-in. angle iron, extending all the way through at the lots without a splice, and spliced in the centre at the bottom. The flange of this angle iron, being 6 in. wide, gives ample room for good fastenings for the lateral bracing, which runs all the way through the top and bottom, and makes the table very stiff sideways, as the chords are 12 3/4 in. wide. By making the top and bottom lateral bracing of angle iron, no twist can be brought on the table by unskillful adjustment.

The engravings, of which fig. 1 is a side elevation, fig. 2 a plan and fig. 3 a transverse section through the centre, show the other details very clearly. Any further information regarding these tables will be cheerfully given by the makers, whose address is given above.

Report of the New York Railroad Investigating Committee.

The following is a summary of the report of the Special Committee appointed by the last New York Assembly to investigate complaints against the railroads of the state, which has taken more than 5,000 pages of testimony since it began its sessions last June! The members of the committee signing the report are A. Barton Hepburn, (Chairman), H. L. Duguid, Charles S. Baker, Leslie L. Noyes, James Low and James W. Wadsworth. James W. Husted and G. W. Terry endorse the report with the exception of the recommendation of a Railroad Commission, and Mr. Thos. F. Grady will, it is said, submit a minority report:

In discharging the duty it owed to commerce and the public, the state either had to construct railroads on its own account or authorize corporations or associations to do so, clothing them with the prerogatives of the state for that purpose. In view of our costly experience in state management of various institutions, and the extent to which the managers and *attaches* of those institutions become factors in our politics, there is no doubt the state acted wisely in committing the construction of railroads to associations of citizens. There is no doubt of the wisdom of lending state aid to encourage railroad building during its incipient and experimental period. It grew, however, into an abuse. The state has contributed in aid of railroads, in round numbers, \$3,000,000, and various localities by donation and investment in stock and bonds, nearly \$31,000,000, for which unwise action so many localities are now suffering. Mr. Van-

derbilt correctly states the relation of railroad corporations to the state as follows:

"The railway corporation is organized primarily for the benefit of the people of the state, and the pecuniary consideration is secondary, but necessary, to induce the citizens of the state to assume the performance of the duty of the state."

The mistake was in not providing proper safeguards to protect the public interest and hold the roads to a strict accountability for their transactions. Thus, through the laxity of our laws and the want of governmental control (measurably excusable, considering the unforeseen possibilities of railroad development at the time of the enactment of those laws, but no longer pardonable in the light of the evidence herewith submitted), have crept in those abuses hereafter mentioned, so glaring in their proportions as to savor of fiction rather than actual history. This investigation must prove of value to the railroads as well as the public; for, while disclosing their mismanagement, it will clear up and dissipate many erroneous impressions in relation to supposed abuses.

FAST FREIGHT LINES.

The Red Line, Blue Line, White Line, Canada Southern, Great Western, Hoosac Tunnel, Erie and North Shore Dispatch, and all other fast freight lines running over roads in this state, except the Merchants' Dispatch, are organized for the purpose of constituting a through line between distant points, as follows: The various roads which are to constitute the through line, furnish a number of cars in proportion to their mileage, form an organization, appoint officers to solicit business and manage the affairs of the line. Each road receives a specified mileage per car (three-fourths of a cent), and bears the expense of the organization and shares in the profits of the line in proportion to the cars furnished, each road retaining absolute control over the rate of transportation on its line. The object of these organizations is to enable a through shipment of goods to any point, however remote, without breaking bulk. They are known as co-operative lines, and are organized in the interest of the public and in the interest of good railroad economy. The Merchants' Dispatch is a non-co-operative line. It is a partnership or association, having a capital of \$3,000,000, represented by 30,000 shares, 27,000 of which have been issued, and 25 per cent. paid in on each share of stock issued. The New York Central & Hudson River owns between 12,000 and 13,000 shares; the American Express Company, 6,500; the Lake Shore & Michigan Southern, 3,000; the Cleveland, Columbus & Cincinnati road, 1,000 shares; Springfield & Cincinnati Short Line, between 400 and 500; Great Western, of Canada, 150; W. H. Vanderbilt, 20; W. K. Vanderbilt, 150, and holds 150 as Trustee; about 24,000 shares held by different railroads, and 3,000 by individuals. It furnishes 3,451 cars, and gets three-quarters of a cent per mile for each mile any of its cars run, and 5 per cent. on fourth class and special classes, and 15 per cent. on all other classes of freight handled, for soliciting business. As to soliciting business, they do precisely the same that the agents and officers of the co-operative lines do, with this difference, that it pays its agents and officers out of its commissions, while the agents of the co-operative lines are paid by the respective roads constituting the line. The Merchants' Dispatch was formerly owned by the American Express Company, and is an offshoot of that organization. It retains all the agencies for soliciting business which belonged to that company; and it is claimed that its organization is more effective in securing freight for transportation than any of the co-operative lines. It has paid 10 per cent. dividend for the past four years, and 25 per cent. of the capital only having been paid in, it amounts to an annual dividend of 40 per cent. It is in evidence that the New York Central, by reason of its large ownership of stock in the Merchants' Dispatch, earns more for its stockholders on the business done by this line than it would under the co-operative system. What it gains, of course, the Western roads lose, and such a state of affairs cannot last long. There is nothing to prevent all this stock finding its way into individual hands. However properly this particular company may be managed, it is wrong in principle, and admits of all the abuses that have been formerly practiced upon stockholders through similar organizations. This is not the opinion of the committee only, but of good railroad men as well.

WATERED STOCK.

The financial history of the Erie road is a thrice-told tale, and needs no detailed recapitulation. It is capitalized at about \$155,000,000. According to the testimony of Col. Balch, a former employe of the road, who was employed to make an inventory of its property, the road and its equipment could be replaced to-day for \$40,000,000, and \$25,000,000 more would cover the additional value of the road as represented by stocks, bonds and interest in other corporations. The company's report to the State Engineer in 1873 shows, under the head of construction account, \$47,000,000, "discount on sale of convertible bonds," etc. This item covers a charge to construction account of "legal expenses, \$891,955.66," for the year ending Sept. 30, 1870. These instances serve to illustrate the fact that the construction account of this road not only covers the proper cost of the road, but, like charity, covers a multitude of sins. According to the same witness, nothing has been improperly charged to construction account since 1872. The amount of what is properly termed "water" which enters into the capitalization of the Erie road, was differently estimated, and ranged up to \$70,000,000.

In addition to this "water," another most deplorable load was heaped upon the back of this over-burdened corporation under the administration of Mr. Watson. A loan of \$25,000,000 was placed on the English market, and one McHenry was the party through whom it was placed. Pending its negotiation two successive dividends, of limited amount and of very questionable propriety, were declared. Of the \$10,000,000 of convertibles first placed the road received \$8,000,000; of the remaining \$15,000,000 the road received \$6,200,000. Thus, out of the total loan of \$25,000,000 the road received \$14,200,000, and contested claims against worse than worthless parties for the balance; its bonded indebtedness calling for interest increased \$25,000,000, its revenues \$14,200,000. Could any more certain or expeditious course be taken to bring a road to ruin than such management as this? It was urged that confidence was had in McHenry. Something more than confidence ought to have been had as security for honest conduct, and if railroad managers expose their trust so recklessly, the Legislature must interpose some protection for stock and bondholders and the public.

The contract of consolidation of the 10 roads forming the New York Central Railroad was made in 1853, in conformity to an act of the Legislature of that year. Stock of the new corporation was issued in exchange for the stock held in these several corporations. These several roads had enjoyed different degrees of prosperity, their stocks possessed different values, and their relative differences were adjusted by issuing premium bonds. The amount of said premiums was \$8,894,560; in other words, so much water or fictitious capital was added to the road. The subsequent watering process upon this road is succinctly described by Mr. Worcester, Secretary of the New York Central and Hudson River Railroad, as follows:

"The New York Central didn't double its stock or affect its stock; it couldn't; it was not authorized to; the Hudson River never doubled its stock—it was not authorized to; the Consolidation Act authorized railroads to consolidate and form a new company; the new company was authorized to fix its capital stock; the capital stock of the New York Central & Hudson River Company—the new company—was made a certain amount, and that amount was about twice the original capital of the New York Central & Hudson River Railroad alone. It was very nearly double the amount of the combination of those two capitals."

Thus, as calculated by this expert, \$53,507,060 were wrongfully added to the capital of these roads. At the session of the committee of Oct. 13, the Chairman called the attention of Mr. Depew, Attorney of the New York Central Railroad, to the fact that the committee would infer from the evidence as it then stood that the dividends above referred to were simply "water," and that if any portion thereof was properly construction account, the committee desired him to submit specific evidence on that point. No evidence whatever was offered by the railroads upon that subject. The only answer made, and the only answer to be made, is that the Legislature sanctioned it. True, the Legislature of 1860, upon the report of a committee, authorized the consolidation of adjoining railroads and authorized them to fix their capital stock. Under this law the New York Central and Hudson River roads were consolidated and their stock fixed at such a sum as to cover and legalize the several scrip dividends and "premium bonds" issued. These dividends were thus legalized upon the pretense that they represented former earnings of the road and real values which the stockholders were entitled to share. The sworn reports of the company up to that date show no such surplus, nor any corresponding amount as having entered into construction, and if properly and truly made, there could have been none such. Either a gross wrong was perpetrated upon the stockholders prior to 1860, or a gross wrong was perpetrated upon the public at that time. The premises admit of no doubt. These several dividends were fictitious, and the said "premium bonds," the Legislature legalized it! The Legislature, too, passed the "Erie Classification bill," but does any one imagine that the passage of those laws was the deliberate act of conscientious conviction on the part of the bodies who passed them—that a patriotic sense of public duty and regard for the public interest induced their passage? It is proper to remark that the people are quite as much indebted to the venality of the men elected to represent them in the Legislature as to the rapacity of railroad managers for this unfortunate state of affairs.

There is no redress for the past, either as to the Central or the Erie. On the former road the Legislature has lent its sanction to the process of capital watering; on the Erie the bonds and stock representing misapplied funds have gone into the hands of innocent holders, the whole road has passed through a reorganization scheme under the direction of the court, and there is no possible remedy for the past. There is in the power of the Legislature a remedy for the present and the future. Do not imagine that the process of stock watering is ancient history, or that it belongs to a period of inflation not likely to occur again. So late as June, 1879, parties in New York, by a clever arrangement, added \$13,000,000 of watered stock, pure and simple, to the capital of the elevated roads in that city. Stock watering has always been practiced wherever the possible earnings of a road would warrant it, and it always will be done in future where the possible earnings of a road warrant an increase of capital, until the strong arm of the government prevents.

TERMINAL FACILITIES.

The cities of New York and Brooklyn, from their insular position, enjoy peculiar advantages in receiving and forwarding freight by water. What is to their advantage in this respect is to their disadvantage as a railroad terminus. So long as freight was brought from the West via canal and Hudson River this harbor supplied every need and was entitled to the high encomiums so oft pronounced upon it; but, with by far the greater part of commerce done by junction of rail and vessel, New York is at a disadvantage as compared with her mainland rivals.

At Baltimore the tracks of the Baltimore & Ohio road, running to Locust Point, where all its imports and exports are received, do not even run through the corporate limits of Baltimore. The warehouses and docks of the city of Baltimore, along the entire water front, are reached direct by cars of the railroads terminating there. This is done through the streets of the city by horse power. Large elevators are provided for handling grain. The elevator charges for grain are: On the grain from cars 1 1/4 cents per bushel, including storage for ten days; same from vessels, when received, 1 1/2 cents per bushel; each succeeding ten days or parts of the same, three-eighths of one cent per bushel. Vessels can enter that harbor with the same draught of water that vessels can enter New York. There is a limitless amount of water front, easily available and of comparatively little value. The state of Maryland guaranteed the Baltimore & Ohio road, in its charter, immunity from taxation of every kind for all time.

The harbor of Philadelphia is not equal to Baltimore in some respects. The passage up the Delaware River, a distance of 100 miles, is a hindrance to sailing vessels, necessitating longer steam towage. While vessels drawing only 24 feet of water can reach Baltimore, or, as a rule, New York, vessels of 26 ft. draught can enter the harbor at Philadelphia. New York harbor being a salt water harbor, vessels can load and carry 5 per cent. heavier cargoes than in the fresh-water harbors at Philadelphia and Baltimore. The export and import business there is done in part at Greenwich Point, but mainly at Girard Point, 5 miles below the city. There are large grain elevators managed independently of the railroads, and whose charges for elevating, including first ten days' storage and delivery to vessel, are 1 1/4 cents per bushel on freight received from cars; on freight received from vessel, including ten days' storage, 2 cents; delivering same to vessel, 1/4 of a cent; every succeeding day's storage, 1/4 of a cent.

All Philadelphia roads have access to the water-front of the city, and the freight is transferred directly to warehouse and vessel without any intermediate handling or expense. Freight cars are moved through the streets by horse power, as in Baltimore. There is any amount of water-front, easily available, at comparatively low prices.

The city of Boston has a fine harbor. The state of Massachusetts recently completed the expenditure, according to the statement of the Massachusetts Railroad Commissioners, calculating interest to January, 1880, of \$19,523,579.94, in building the State Railroad between Greenfield and North Adams, and in tunneling the Hoosac Mountains, to improve its commercial connections with the West; and has incurred great expense in building bulk-heads, piers and slips, and otherwise improving the harbor of Boston. All railroads terminating at Boston have access to all docks and warehouses along the city's water-front, and the same facility in transferring freight without intermediate handling is possessed that Baltimore and Philadelphia enjoy.

Norfolk has one of the finest harbors in the world, and only lacks capital and enterprise to attract to its compara-

tively unused shores a large share of the Southwestern commerce of the country.

Richmond, 104 miles up the James River, is accessible to vessels drawing eighteen feet of water, and is advancing its claim to share in the commerce of the West and Southwest.

A BAD SYSTEM IN NEW YORK.

In the harbor of New York there is a lighterage expense of 3 cents per hundred-weight necessarily incurred in freight from the proper terminus of the railroad to various warehouses and points of shipment in New York, Brooklyn, Staten Island, the Jersey coast and other points about the harbor. The lighterage charge is deducted from the through freight rate from the West, and the balance pro-rated over the entire haul (rates west of Chicago are arbitrary). The New York Central runs the bulk of its freight to Sixty-fifth street, the lowest down-town place where it could secure land adequate to the handling of cattle and grain. It has a pier at Thirty-third street, and a station at St. John's Park for local freight. It has access to these stations by rail, but its Barclay street station and stations at Piers 4, 5 and 6 East River, are reached only by floats and lighters. It has tracks to the steamer-piers above Canal street, but to steamers below Canal street its freight is lighterage from Sixty-fifth street, when it ought, to place it on a par with other railroads, and New York on a par with other cities, to run to every dock and warehouse on Manhattan Island. The Erie and the Pennsylvania Railroads, terminating at Jersey City, are compelled to lighter their freight to and from all points on Manhattan Island, Long Island, Staten Island, etc. And all these roads in competition with the canal are compelled to deliver freight at any and all points throughout the harbor where consignees may direct. Canal boats towed into the harbor, as a matter of convenience to them and the easiest way of discharging their cargoes, are towed along ship-side and unloaded directly into the vessel. The railroads transporting freight in competition with the canal were compelled to deliver the freight as the canal did; and hence the peculiarities of the harbor and the custom established by the canal compel, at this day, the performance of this expensive lighterage service, necessary to connect the terminus of the roads with the point of delivery, for shipment abroad, and the warehouses of merchants.

The very prosperity of the harbor, in one sense, aggravates this matter. The steamships, enabled to obtain a cargo from the promiscuous freight offering itself, and which is brought to their docks, decline to go to the wharves or elevators of the railroad, and insist upon all freight being brought to their dock. The same is generally true of sailing vessels, who receive their freight alongside, lying at anchor in the harbor. The extent of this lighterage service is well illustrated by the fact that the Erie Railroad made 8,539 special deliveries of grain in the harbor of New York for the year ending Dec. 31, 1878.

The Erie road has nine distinct stations in the harbor of New York for the delivery and reception of freight, and received freight during the year 1878 from 73 different points in the harbor. All other roads terminating in New York, of course, in competition, are compelled to do the same thing. This lighterage charge is of no profit to the railroad, and of no advantage to any one save the parties engaged in performing the work; but is just so much tax upon the transportation of goods through this port, and must ever continue as a burden upon commerce, threatening a diversion from this city, until the vessel and the car are brought together.

In 1869 the Pennsylvania Railroad entered Chicago and began, in its own interest and that of Philadelphia, a contest for the trade of the West. * * * In 1870 it extended its Eastern terminus to New York. The Pennsylvania Railroad system has a capital of nearly \$500,000,000, according to Judge Shipman; and in the pooling agreement is given 25 per cent. of the New York business. Last year it carried 13 per cent. of all the freight shipped to New England, and in so doing lighterage it from its terminus at Communipaw to Fort Morris, a distance of twelve miles, and thence by rail.

The Baltimore & Ohio road entered Chicago in 1874, and began a contest in the interest of Baltimore. * * * It comes into New York by an arrangement with the Pennsylvania road and Philadelphia, Wilmington & Baltimore road and is given 9 per cent. of the New York business in the pool. It is only since 1869 that New York has been seriously threatened with a diversion of trade. She has little to fear from Boston, nor, indeed from the North, unless the completion of the Welland Canal enlargement should be supplemented by a corresponding enlargement of the St. Lawrence Canals, which would create a rival of most formidable proportions. * * * Goods can be shipped from Chicago to New York via Philadelphia at twenty-eight miles less distance than by the Erie and its connections, and forty-two miles less than by the Central's short line, and fifty-eight miles less than by the Central and Lake Shore.

Goods can be shipped from St. Louis to Baltimore and coasted up to New York at a distance 10 miles less than via the Erie road, and 40 miles less than via the Central road. Chicago is 90 miles nearer to Philadelphia than to New York, and 118 miles nearer than by any New York road; 110 miles nearer Baltimore than New York, and 138 miles nearer than by any New York road. St. Louis is 149 miles nearer to Baltimore than to New York, and 210 miles nearer than by any New York road. Cincinnati is 187 miles nearer Baltimore than New York, and 371 miles nearer than by any New York road. Baltimore is only 2 miles nearer Cincinnati than Richmond, and 76 miles nearer than Norfolk.

Cincinnati has just incurred an indebtedness of \$18,000,000 in opening a southwestern railroad to Chattanooga, in order to make itself the distributing and receiving depot of the Southwest. Why should not these cities send their produce seeking European markets by the shortest route to the seaboard and thence by vessel abroad? We looked for the answer to this question in the topography of the country. Its solution must be found in a united and cooperative effort on the part of our railways, our state, our city, and our citizens to retain and increase our commerce. Success cannot attend a divided effort. * * *

Our roads are in need of no subsidies; but while other states and cities are subsidizing their roads and incurring vast amounts of indebtedness in acquiring a larger share of transportation, New York must not pursue an obstructive policy, which the testimony tends to fasten upon her.

Our roads do need terminal facilities to place them on a par with other roads, and to place New York on a par with other cities. Mr. Vanderbilt testifies that the business of his road could not be increased without increasing its terminal facilities in New York. Mr. Blanchard describes the terminal facilities of the Erie as inadequate. * * *

New York has recently submitted, in the interest of rapid transit—wisely submitted—to have her streets occupied by an ungainly structure, the value of certain property seriously disturbed and the convenience of a large portion of her citizens materially interfered with, and it seems equally necessary, in the greater interest of commercial supremacy, that she submit to whatever inconvenience may attend in bringing her railroads in contact with her warehouses and the wharves of her steamships. If the tracks cannot be brought down to the wharves of the steamships

some means must be devised of inducing the steamships to go to the elevators and wharves of the railroad. This would still leave Brooklyn insulated, and afford facilities to the Central line which would give it just so much advantage over the Erie and other rivals. At this point, Mr. Vanderbilt's testimony that his rivals would not permit him to use the Belt line of railroad for freight cars at night, a privilege accorded him by the city, is pertinent, as showing the complicated nature of the question, and the extent to which railroads combine to dictate to each other. * * *

To-day, the Pennsylvania road carries grain from Chicago to Philadelphia for 38 cents per hundred-weight, to New York for 40 cents, and out of that pays 3 cents lighterage charge, realizing 37 cents to New York. It virtually pays 1 cent per hundredweight for the privilege of hauling freight the additional 90 miles. Could this charge be done away with, even under the agreement as to rates, New York would be on a par with Baltimore on east-bound freight. Less complaint was made of the differences on west-bound rates; the subject received less attention in the testimony and arguments of counsel, and hence less in this report.

The export controls the import. Goods will be imported at a point where an export cargo can best be obtained, as a rule. * * *

It would seem that the authorities of the port, the authorities of the city, the merchants, and the railroads, by a cooperative effort and possible exercise of authority, might bring the tracks of the roads to the wharves of the vessels, or constrain vessels seeking export trade to go to the docks, wharves, and elevators of the railroad. It is certainly the interest of all parties above mentioned, and therefore must be their desire to do away with the lighterage charge, which is a standing menace to all property seeking export through New York. Community of interest ought to insure unity of action and success.

The only law that would be efficacious would be an appropriation to effect this desired result. Such aid the Legislature, under the amended constitution, cannot grant; neither can the city of New York. Whatever expense is necessary to incur, the railroads must pay. The Legislature can aid only indirectly, by enlarging the power, if insufficient, of local authorities, and revising and amending laws relating to the port. This lighterage charge is in no sense a discrimination, and nothing for which railway managers are responsible. They of all parties are the most anxious to avoid it. * * *

New York has natural advantages of a superior character. She has her water route to the West, which will always insure her a large share of the Western produce. * * * While quietly resting in the conscious security which these advantages give her, her rivals have been multiplying exertions to wrest her commerce from her, and have measurably succeeded. * * *

The proposition to abolish the tolls upon the canals and make their support a charge upon the whole state, has received its strongest indorsement from New York and Brooklyn, commanding their solid support. Should this policy prevail, the territory immediately bordering upon New York harbor would, according to the apportionment of the tax for 1879, be compelled to pay 60 per cent. of the tax for this purpose. In the report of the Dock Commissioners for 1878, a revenue to the city of nearly \$800,000 is reported, a net revenue of \$223,745.97; and it is confidently predicted that the immediate future will show a net revenue of \$1,000,000 per annum. All the revenue the city receives from her water front is in the nature of a tax on commerce, and the question may be fairly raised whether New York's policy in this respect does not antagonize her canal policy. * * * It is said by competent and responsible parties that, while the dock revenues to the city are about \$800,000, the actual revenue to the city's lessees is several times that sum. The port charges are higher than other ports when they ought to be lower. The income of the Health Officer, for instance, is estimated at from \$60,000 to \$100,000 per annum—an excessive amount—and many other charges are in proportion. This whole matter needs thorough examination. * * *

RATES.

On April 5, 1877, the New York Central & Hudson River, the Erie, the Pennsylvania Railroad, and the Baltimore & Ohio entered into an agreement the preamble of which recites:

"To avoid all future misunderstandings in respect to the geographical advantages or disadvantages of the cities of Baltimore, Philadelphia and New York, as affected by rail and ocean transportation, and with a view of effecting an equalization of the aggregate cost of rail and ocean transportation between all competitive points in the West, Northwest and Southwest, and all domestic or foreign ports reached through the above cities, it is agreed," etc.

Then follows an agreement that on east-bound freight 3 cents less per 100 pounds shall be charged to Baltimore, and 2 cents less per 100 pounds to Philadelphia, than the rates established from time to time to New York; also,

"It being further agreed that the cost to the shipper of delivering grain at each port from the terminus of each of the roads to the vessel in which it is exported, as well as the number of days' free storage allowed thereon, shall be the same."

While this equalizes the terminal charges, it should be remembered that what is paid for elevating goes not to the railroad elevators, but to the floaters and Atlantic Dock elevators. On west-bound traffic: "The difference in rates from Baltimore and Philadelphia below New York shall, on third class, fourth class and special, be the same as the differences fixed on east-bound business, and on first and second classes, 8 cents per hundred less from Baltimore, and 6 cents less per hundred from Philadelphia, than the agreed rates from New York."

By a similar agreement of June 8, 1877, the west-bound business of the port of New York was divided between the above roads as follows: The New York Central & Hudson River, 33 per cent.; the Erie, 33 per cent.; Pennsylvania, 25 per cent.; Baltimore & Ohio, 9 per cent.; and all California business divided equally. The contract creates a joint commissioner, and provides, among other duties, that

"He shall furnish each company, at the end of each week, a statement showing the excess or deficit of each class carried above or below the agreed percentages of the parties hereto, which shall be accompanied by instructions to the companies in excess to deliver, upon the demand of the company in deficit, the amount of tonnage of each class required to equalize as agreed."

Under these agreements Philadelphia has the same reason to complain of the rate given to Baltimore that New York has, though not to the same extent. This agreement of April 5, 1877, instead of equalizing the through rates from Western points to foreign ports, has had the opposite effect. The evidence as a whole shows that the ocean rates from Philadelphia for the year average slightly higher than the rates from New York, and that the rates from Baltimore average slightly higher than the rates from Philadelphia, the difference by no means equaling the difference in rail rates conceded to those cities. It should be added, that Boston is given the same rate as New York, and the ocean rates from New York and Boston average the same.

These agreed rates were the result of a severe railroad war. Making the managers of the New York lines at the time of making this agreement were reprehensible or no, the

fact remains that the city of New York is discriminated against; that is, with the agreed differences in railroad rates maintained, and the substantial equality of ocean rates as proved to exist, the export trade will of necessity seek Philadelphia and Baltimore. A difference in rate of 1 cent per hundred-weight would be \$2.50 per car, and on a large shipment would control the route in making a through bill of lading, as would also $\frac{1}{2}$ or $\frac{3}{4}$ cent difference. It was conceded by Judge Shipman, in his argument before the committee, that the present differences in rail rate, with substantial equality in ocean rates, would have the effect to divert traffic from New York to Baltimore and Philadelphia. Whatever baneful consequences attend such diversion, the railroads must themselves, of necessity, suffer more heavily than any other industry, and, prompted by their own self-interest, they will be constrained to unite in any effort, or to do battle singly, to preserve the equality in this respect of the port at which their roads terminate. A claim for a modification of the differences is now pending on the part of the New York roads.

New York possesses the key to the situation in the Erie Canal. While the committee made no attempt to investigate the relation of the railroads to the canal, and sought to lessen their labors by avoiding this question, the canal, like *Banquo's* ghost, would not down; we were compelled to meet it at every point and turn of the investigation. The cost of water transportation from Chicago to New York determines the rate of rail transportation, and the rate of rail transportation from Chicago to New York is the base line upon which railroad rates are determined and fixed throughout the country. The rates, by agreement of the principal railroads of the country, from all points in the West to the seaboard, are made a certain percentage of the Chicago rate. There remains for the railroads to do this additional act of justice and see that the rates from points in the state of New York to the city of New York are made a proper percentage of the Chicago rate. Mr. Blanchard says:

"The state holds within its grasp the great controller of the freight rate within its borders, to wit, the canal; there is not a town that is not affected more or less within this whole state, from the extreme northeast to the extreme southwest corner of it, by the canal policy and rates of this state."

Mr. Fink, a recognized authority on railroad matters, testifies that whenever a reduction is made in the rail rate from Chicago to New York, occasioned by lake and canal competition, that reduction extends to Louisville, Nashville and Savannah. Mr. Vanderbilt, in his testimony, attached equal importance to the canal, and regarded it as an important factor in the commerce of the state and country. The maintenance of our trunk canals should engage the earnest solicitude of the state. Nothing could be more prejudicial to the interests of the city of New York, or the state as a whole, than to permit their efficiency to be impaired or their usefulness compromised.

ANNUAL REPORT TO THE STATE ENGINEER AND SURVEYOR.

If the intention of the framers of the present law, requiring railroads to report annually to the State Engineer, was to give the public or the state a history of the year's transactions of the different roads, they most signally failed. The idea of making public the transactions of a railroad in order that publicity may deter mismanagement is an excellent one; but the present law utterly fails to compass that object. It has been denounced as wholly inadequate by our State Engineers, and especially by Mr. Seymour in his first report under the law of 1850. All of the railroad people who are experts on this subject, who testified before the committee, insist that a full compliance with the present law would not disclose the true financial condition of a road. They insisted that they had fully complied with the law, and as frankly conceded that their reports, thus made, did not disclose the actual condition of the company. There is entire accord as to the defects of the present law and method of correction. It is believed that the accompanying bill, based upon the defects stated, and calling for additional detail, will fully cover all defects in the annual report.

DISCRIMINATIONS.

The charge that the railroads of this state discriminate against the citizens of the state, and in favor of Western and foreign producers, is fully proved by the evidence taken. The charge that they discriminate against certain localities in the state, as compared with others, is fully proved. The charge that they discriminate in favor of certain individuals, as compared with others in the same locality, is fully proved.

Every man who pays the tariff rate is discriminated against when any man is given a special rate on a similar shipment.

The tariffs of the several roads all recognize distance as a controlling element, and in no case do they make the longer haul cost less than the shorter. They conform generally to the popular conception of what a railroad tariff ought to be. Special rates conform to no system and vary without rule, and of these exclusively we now speak. A special variation of the schedule rate, made alike to the general public and without discrimination, is free from objection.

The committee find, made and in force within the period of one year, a number of special contracts on the Central & Hudson River road, estimated by the railroad people at 6,000. The number on the Erie was very much less, though the practice of giving them the same. Upon these roads, and all other roads, special rates were given upon time contracts, and many upon single shipments, and in all instances they varied the open rate to the advantage of the party obtaining the special rate. These rates are made secret; secrecy being expressly or impliedly part of the agreement. Your committee made an abstract of the local special rates on the Central; also, of the local special rates on the Erie; also, an abstract of the through rates to other states on the Central. This last illustrates the through business of the Erie quite as well as of the Central. These abstracts do not contain exceptional cases, but are fairly illustrative of the system or want of system in making rates. By examining these abstracts it will be seen that certain localities are especially favored; that individuals in the same locality, upon car-load shipments even, are given preferential rates. The rates to local points in the state, compared with the rates to points out of the state, show this extent to which distance is disregarded, and justify the complaint as to the relation of through and local rates. The committee, however strenuously endeavoring so to do, have failed to elicit any principle rule, criterion or limitation, in accordance with which special rates are given. We were told that special rates were given when the article could not bear the tariff rate. Volume does not control, nor regularity of shipment, for special rates are given on single shipments and on parcels, as well as car or train loads. We are told that every application is judged by itself, and with reference to its own peculiar circumstances, and it depends upon the judgment of the officer to whom the application is made whether a special reduction is given, and the extent of the reduction. It is very easy to see how this might depend upon the prejudice or the favoritism, and not the judgment, of such officer. In the joint letter of Presidents Vanderbilt and Jewett to the committee is laid down the rule of charging all an article will bear, and at the same time stimulate its production. * * * But we are distinctly told that public interest plays

an insignificant rôle in the theatre of railroad management. It is at best but a servant waiting upon the interest of the stockholders. The wrong consists in exercising a censorship over the business affairs of the community, secretly, arbitrarily, and unequally varying rates, building up this, developing that—not only performing the proper functions of transportation, but taking into consideration the probable or possible profit of a shipment, and adjusting their rates accordingly. If the shipper is likely to make a large profit, they compel him to divide; if the margin is a close one, they determine whether the shipment shall be made or not, whether it shall result in a profit or loss, and the amount of profit or loss. Thus, under this system of management and this method of giving rates, is every merchant, every manufacturer, every shipper, and, through them, every individual along the 5,550 miles of railroad in this State, with its five hundred millions of capital, measurably in the power of these corporations. Conciliate their goodwill, court their favor, and favorable rates will follow; incur their hostility, and the margin of their displeasure may be read on your freight bills. This has been well illustrated in the course of this investigation. Not a shipper would testify voluntarily, however freely he might talk in private, but insisted upon being subpoenaed and put in the light of being dragged before the committee and compelled to answer.

The political influence of these corporations should be understood. Not less than 30,000 voters are in the direct employment of the railroads of this state—a number sufficient to have turned the scale in any election in recent years. These employees are doubtless divided in political sentiments, yet in times like the past and the present, the question of remunerative employment is of paramount importance to the individual employed as compared with the success of either party. The political sentiments of corporations have been aptly and truly described by a prominent railroad man who testified: "In a Republican district, I was Republican, in a Democratic district, I was Democrat, in a doubtful district, I was doubtful; but I was always Erie." The possible exercise of this vast political power, direct and indirect, not to discuss its exercise in the past, seems to your committee an unanswerable argument in favor of instituting governmental supervision of railroads and holding them in their management to a strict accountability.

He who goes into a railroad office and barbers for a low rate gets it; he who, relying on the equitable treatment which common carriers are bound to give, or not knowing that secret special rates may be had, delivers them his goods and calls for his freight bill, pays a higher rate. Competition among railroads as a regulator of freight tariff is a failure. From their nature they do not admit of competition in the sense in which that word is generally understood and used. No community can support parallel railroads. Practically but one road reaches the same territory, except at certain specific points—competitive. Even in the absence of any pooling agreement there is no such competition as is afforded by the scores of grocerymen, hardware, dry goods, and other dealers, to the public in the purchase of the various kinds of merchandise that supply their wants; and where competition does exist, it is of a cut-throat rather than of a business character. It is demoralizing and unjust to the public instead of protecting it against excessive charges. It gives certain points and certain shippers—large shippers as a rule—very low rates, which intermediate points and other shippers are taxed to equalize. In a general way, between one country and another, between one section and another, between rail and water, which is a free highway, competition exercises a beneficent office, and the natural laws of rivalry and trade adjust and correct evils in the aggregate; but, as the railway is artificial, so must the restraining power that adjusts the relations between through and local traffic, between competing and non-competing points, between large and small shipments, be artificial also. * * * Competition, therefore, stands confessed from all quarters as failing to consult either railroad or public interest in the part it plays in fixing rates.

RECOMMENDATIONS.

The question we are called upon to consider is as broad as commerce, and commerce is king with the whole world for vassals. The problem of transportation is an unsolved one, and from its very nature must ever remain so. Each generation must determine for itself. The constantly-shifting conditions which surround it, the ever-changing elements that enter into it, the continual offerings which genius contributes to cheapen and facilitate transportation, present an ever-shifting phase to this kaleidoscopic question, calling for an ever-varying solution. The telegraph, the steel rail, the improved motor, the Atlantic cable, and kindred causes, have revolutionized and are continually revolutionizing commerce. The tariff of a dozen years ago seems extortion in the light of present charges. Called from various pursuits to consider this question, we were naturally embarrassed by its magnitude and the vital interests involved; and now, at the point of suggesting remedies for the wrongs proved to exist, remedies in themselves not difficult of suggestion, we are confronted with practical difficulties of a very embarrassing nature.

The jurisdiction of this state is too limited. Proxies, watered stock, annual reports, and other matters within our state limits, are within our control, and should be fully and properly regulated. The New York Central is the only road engaged in the carriage of freight to and from the West wholly within our jurisdiction. The Erie is a New York corporation, but runs through three states, and has its eastern terminus in a foreign state. Even the port of New York, that contains the city of our pride and our solicitude, is not wholly within our control. The eastern borders of her harbor are marked by the coast of a foreign state. Thirty-four per cent. of New York's business is done by powerful rivals of our own roads that tap the granaries of the West by the shortest and most direct route. We might enact laws that would drive the business from our own roads without improving the condition of affairs in this state. Indeed, such a course would aggravate matters, for the interests of these rival roads centre in rival cities. We might cripple the prosperity of New York; we might enact laws that would build up Jersey City and transfer the legitimate growth of New York to the Jersey coast. It is as imperative that such consequences be avoided as it is that present wrongs be redressed. While the laws of commerce ignore political divisions wholly, our jurisdiction is circumscribed by the limits of the state of New York.

States divided by navigable waters, which are everybody's highway, present borders which the two systems of traffic must respect, and the breaking of bulk and terminal expenses incidental thereto is unavoidable; but the artificial line of the surveyor, marking a political boundary, though it may determine where a man shall vote or pay his taxes, least of all lines has neither breadth nor thickness in determining the currents of trade. Whatever prominence may be attached to state individuality and state rights, in a commercial sense we are eminently a nation, and the sooner that fact is recognized, the better it will be for our commerce. There is not the slightest reason why the Liverpool merchant should not buy his grain, graded in Kansas City, by cable, and have it placed alongside the dock at Liverpool with but one intermediate handling—the transfer from car to vessel at the seaboard. In the close competition of the

present age transportation must be cheapened to that extent, and it were absurd to expect produce to be handled at New York for the sake of enabling those who handle it to make a profit. The point of production will seek the point of consumption by the cheapest and quickest route, and kings and parliaments are powerless to prevent. The complaint that New York makes as to the loss of jobbing trade, Chicago must make and St. Louis also. Certainly, a percentage of the complaints lodged against railroads is due to the inexorable laws of trade. Congress, with power commensurate with our territorial limits, in conjunction with the states, can regulate this matter. Under the Federal Constitution, Congress may regulate inter-state commerce, while the states only can regulate that within their borders.

The complication of jurisdiction is emphasized by the peculiarities of our geographical position. The Baltimore & Ohio and Pennsylvania railroads reach New York city by lighterage and ferry from the Jersey coast without anywhere coming within our jurisdiction. The Erie road has 35 points of actual contact and competition with other roads. Many of these points of contact are with roads leading to Philadelphia and Baltimore. The New York Central has nine points of actual contact with roads running or connecting through to Philadelphia and Baltimore. Many of these competing roads are foreign corporations, running but a few miles within this state, and, therefore, could be controlled by absolute law to but a limited extent.

Rates ought not to be secret; but to go to the extreme urged by some, and compel the publication and posting of rates at all stations within this state, and prescribe a fixed period that all rates must be posted before they could go into effect, a rule that would be eminently just and proper could be enforced generally throughout the country, would not only give notice to the public, but also to all competing roads. And at all points of contact—and there are many along the Erie and Central also—Pennsylvania and New Jersey roads could make their rates just enough lower to get the business and take it to Philadelphia or Baltimore, or even to New York, over their lines. For instance, the Delaware, Lackawanna & Western, in fixing a through rate from Oswego or Utica to New York, can comply with any requirement the Legislature may enact, until they get to the state line, and then, unrestricted as they are in Pennsylvania and New Jersey, could vary their rates so as all the while to place our own state roads at a disadvantage; this road, which is a Pennsylvania corporation, might publish its rates at all New York stations, and, for instance, charge 25 cents per hundred weight from Oswego to the state line, and nothing from there to Jersey City. The line being a continuous one, it would make no difference to its treasury whether the charge was located upon a portion of its line or the whole of it. The same may be said of the Northern Central, running from Canandaigua to Baltimore, and the same of the Buffalo, New York & Philadelphia, running from Buffalo to Philadelphia, and others. Our railroads should be forbidden to make secret rates, and compelled to treat all shippers alike; but the propriety of compelling the publication of rates, and the publication of all proposed changes, is a matter for your serious consideration.

Your committee made an earnest effort to ascertain the cost of transportation, and the relation of the cost of through and local traffic. The best information that we could obtain does not enable us to suggest the enactment of any fixed ratio between state and extra state points, neither are we able to suggest the enactment of any fixed ratio between different points within this state. A thorough consideration of all the evidence adduced upon this subject, and of the subject itself, induces the conviction that the passage of what is properly termed a *pro rata* freight law would be prejudicial to the interests of the public. The experience of Western states in this direction ought to be a warning, and a satisfactory reason for declining to bring this subject into the field of legislation in this state. While there are certain general propositions that may with propriety be laid down by the Legislature for the control of traffic managers in the adjustment of rates, within those general rules there must be permitted an elasticity of management, and freedom to exercise judgment and discretion upon the ever-varying questions that constantly present themselves for action. As a principle of railroad management, no more should be charged on small shipments than on large shipments, proportionately, than the additional cost for handling.

A proper unit of shipment should be fixed. The practice of charging more for a short haul than for a long haul should be forbidden; the granting of unequal or preferential rates should be forbidden; the making of secret rates and the giving of drawbacks and rebates for such purpose should be forbidden; and your committee are of the opinion that the Legislature may safely go to this extent without infringing the proper discretion and elasticity of management which railroad managers must of necessity possess, without driving the business from our own state roads to the rival roads of other states, without driving the commerce from our own cities to rival cities, and without in the slightest degree infringing or compromising the vested rights of railroad property. Your committee, therefore, accompany their report with proposed legislation designed to correct the above evils and the evils of the proxy system; designed to remove the defects in the law requiring an annual report to the State Engineer and Surveyor, so that said report shall disclose a full and complete history of the year's transactions of the road, both financial and otherwise; designed to remove those provisions of law whereby it is possible to issue bonds convertible into stock, convert them into stock, and place the stock upon the market, all in one transaction, as was notably done during the Fisk and Gould administration of the Erie, and which may be done at any time for the purpose of obtaining or maintaining control of the road; amending the law passed in 1869, and still in force, which permits any two railroads, upon consolidation, to fix their capital stock at any amount, or, in other words, to infuse any amount of water into it; amending that provision of law which provides for issuing stock by railroads, so as to give to the transaction publicity, and require, preliminary thereto, the consent of the public, through its proper officers, and designed to prevent discriminations upon like and contemporaneous shipments.

The business of transportation requires the greatest freedom of management of any business extant. This is manifest to the most casual observer. The difficulty and the danger of imposing cast-iron regulations upon our railroads, especially in view of the fact that they would apply to our railroads only, leaving their competitors free and untrammelled, compels us to inquire what other means or instrumentality may be made effective in obtaining the redress which the public seek, and to which they are entitled. Certainly, a railroad, in order to be successfully managed and prosperous, in the whirlpool of competition of the present time, must be run by brains and not by legislation; and the reforms in railroad management must come through railroad managers by means of a public pressure brought to bear upon them. The claim given prominence by Mr. Depew, that railroads, in guarding the interest of their stockholders, will regulate themselves, would have more force were it not painfully apparent that railroads are not always run in the interest of the stockholders. During recent years the management and the stockholding interest of the New York Central have been identical, and that road has been conducted with the best of

economy and with exceptional ability; but, according to Mr. Depew himself, under prior managements, the interests of the stockholders were disregarded in various ways. Boards of railroad directors frequently represent but a small share of the stockholding interest; and, under the temptations which our railroad system holds out, have in the past frequently consulted their own interest to the detriment of the trust which they represented.

It seems to your committee that the wrongs that exist may be ameliorated, if not corrected, by introducing into the determination of these questions a public element which shall give to the public interest a consideration which the evidence shows it does not now receive; and to that end we recommend a commission, to be composed of three individuals, with power of investigation and recommendation.

The claim recently put forth through the press by Mr. Vanderbilt that, in case of a commission, the commission must either own the railroads or the railroads own it, presupposes an absolute hostility between the interest of the railroads and the interest of the public which, in the judgment of this committee, does not, or, at least, should not, exist, and also a degree of venality on the part of public officers which a judicious Executive will easily avoid. The prosperity of our state is inseparably connected with the prosperity of our railroads. And in contending for commercial supremacy and the control of the traffic of the West and Southwest, with their constantly-growing power in questions of commerce and of government, public and railway interests will be identical, and their efforts must be united. This emphasizes the necessity of immediately correcting the evils of railway management in this state, in order that all interests may be united.

A commission, to be properly constituted, should, as does the English commission, give a representative to the railroads as well as to the public. One of the Commissioners should be a man thoroughly familiar with the business of railroading, one of recognized ability, and a recognized authority upon such questions; another should be a representative of the commercial interests of the city of New York, and another should represent the interests of the interior of the state; and one of the three should possess legal training. With a commission thus constituted, composed of men of recognized ability and unquestioned integrity, who should devote to this vast question their special consideration and entire attention, it seems to us it would be alike profitable to the public and to the railroads. By means of their powers they could bring railroad management into the keen, bright sunlight of publicity, and subject it to the influence of that most powerful of all motors for the correction of evil—public opinion. This will afford to the public a tribunal to whom they can appeal for a redress of grievances, easily and without expense; whereas, now the only redress is to be had in a legal controversy with a powerful corporate interest. If wrongs should be practiced or attempted, the commission, by investigation, could bring them to light, and the restraining effect of possible or probable exposure of improper management would in itself be a powerful conservator of public interests. Commissions have been tried in many other states of the Union, and from their long continuance it is to be presumed that they have worked satisfactorily and beneficially there. While we easily foresee that an improperly constituted commission, composed of dishonest and incompetent men, would be alike a curse to the railroads and to the public, yet the necessity of enforcing a proper relation of these vast interests to the public and holding them to a proper accountability, and especially in view of our state government as at present constituted, your committee are of opinion that the example of other states and other countries in respect to a commission may, with propriety and with profit, be copied by us. Your committee have suggested remedies for the prominent evils discovered. The very limited time since our testimony was in print has not enabled us to review the whole field of legislation with the thoroughness desired, but the testimony submitted and the wisdom of the Legislature will suggest such remedies as we have omitted to specify.

Prices of American Steel Rails for Twelve Years.

The following record of the prices (in currency) of American Bessemer steel rails at works in Pennsylvania per ton of 2,240 lbs., from 1868 to 1879, inclusive, has been prepared from reports of actual sales for the American Iron and Steel Association, and published in its *Bulletin*:

YEARS.	January	February	March	April	May	June
1868.....	165	167½	174	172	165	162½
1869.....	145	143½	135	134	130½	128
1870.....	110	110	108½	107	106	109½
1871.....	95	96	100	95	103	104
1872.....	104½	104	104½	111½	110	111
1873.....	121½	120	122½	120	120	121½
1874.....	117½	117½	115	118	118½	116½
1875.....	91	89½	78½	78½	80	80
1876.....	67	61	62	62	62	60
1877.....	49	40	40	40	47½	40½
1878.....	41	41½	41½	42	43½	43
1879.....	41	42	42	42	42	45

YEARS.	July	August	September	October	November	December	Yearly Average
1868.....	150	150	150	150	148	147½	158½
1869.....	130	130	130	130½	130½	129	132½
1870.....	110	110	108½	101½	102½	98	109½
1871.....	103½	104	106	105½	103½	106½	102½
1872.....	114½	115½	114	113½	115	120	112½
1873.....	121½	121½	118	120	120	120	120½
1874.....	91	89½	78½	78½	75	72½	94½
1875.....	60	60	60	67	66	65	68½
1876.....	50	50	50	54	53	52	50½
1877.....	45½	44½	44	42½	41½	40½	45½
1878.....	43½	42½	42½	42½	42	41	42½
1879.....	45	48	50	52	63	68	48½

A Singular Accident.

The La Crosse (Wis.) *Republican* of Jan. 24 tells of a mishap on the Southern Minnesota road as follows: "On Tuesday at about 11 o'clock, as Engineer Charles Moore, in charge of engine 7, was bringing his engine down the Fountain hill, after having doubled the first half of his train into Fountain, a number of cattle were observed on the track ahead. He attempted to reverse his engine and come to a stop, when the lever slipped from his hand, striking him in the right side and breaking a rib. He was brought to Hokah last evening, his place being filled by Engineer Jackson, who took the train through to Wells."



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EDITORIAL ANNOUNCEMENTS.

Passes.—All persons connected with this paper are forbidden to ask for passes under any circumstances, and we will be thankful to have any act of the kind reported to this office.

Addresses.—Business letters should be addressed and drafts made payable to THE RAILROAD GAZETTE. Communications for the attention of the Editors should be addressed EDITOR RAILROAD GAZETTE.

Advertisements.—We wish it distinctly understood that we will entertain no proposition to publish anything in this journal for pay, EXCEPT IN THE ADVERTISING COLUMNS. We give in our editorial columns OUR OWN opinions, and those only, and in our news columns present only such matter as we consider interesting and important to our readers. Those who wish to recommend their inventions, machinery, supplies, financial schemes, etc., to our readers can do so fully in our advertising columns, but it is useless to ask us to recommend them editorially, either for money or in consideration of advertising patronage.

Contributions.—Subscribers and others will materially assist us in making our news accurate and complete if they will send us early information of events which take place under their observation, such as changes in railroad officers, organizations and changes of companies, the letting, progress and completion of contracts for new works or important improvements of old ones, experiments in the construction of roads and machinery and in their management, particulars as to the business of railroads, and suggestions as to its improvement. Discussions of subjects pertaining to ALL DEPARTMENTS of railroad business by men practically acquainted with them are especially desired. Officers will oblige us by forwarding early copies of notices of meetings, elections, appointments, and especially annual reports, some notice of all of which will be published.

TRAIN ACCIDENTS IN 1879.

The record of train accidents for December, published last week, enables us for the seventh time to review these accidents for a calendar year. As usual, we preface this review by a statement of what this record is, and particularly what it is not; concerning which mistakes sometimes are made, especially by persons who have occasion to examine this yearly record, but are not ordinarily readers of the paper or of the monthly record of train accidents.

The record is of train accidents only—accidents to trains—and takes no account of injuries caused by trains, or otherwise, to persons on the track or grounds of a railroad, unless these are connected with an accident to the train. By far the largest number of persons injured, and especially of those killed, on railroads, are not hurt on the trains, but are hurt by them while standing on or near the track. Most of these are trespassers, and most of the rest are employes engaged about the trains or the tracks. Neither does this record include the considerable number of persons who are injured by falling from running trains. Information on all these heads is desirable; but it is beyond our power to collect it. Some of the states require the railroads to report it, as New York and Massachusetts. It is, however, useful mainly for quite other purposes than the statistics of train accidents, which, under any circumstances, ought to be reported separately. The chief lesson of the casualties to people on the track is the great danger of grade crossings, the necessity of enforcing caution among employes in yards and about trains and of providing the appliances which require the least exposure in coupling and uncoupling cars and allow the least risk of falling from them, etc. Train accidents result from much more numerous causes, and immunity from them would require the perfect construction and maintenance of road and rolling stock and a perfect administration and discipline. The frequency of accidents of one kind or another is, to some extent, an index to the weak points

of railroads and their operating management. The record directs attention to the evils to be avoided and the dangers most to be guarded against.

The source of our information for this record is chiefly the newspapers. Journals from all parts of the country are examined, many of them for this special purpose, and we think that not many accidents escape us that are reported at all. We get some information by letter, which is often valuable as describing the accident more definitely, or giving its cause more certainly, than the newspaper accounts do.

It is certainly true that only a fraction of the whole number of accidents is ever reported. Derailments of freight trains, unless they cause considerable damage to rolling stock or long delays to passenger trains, are rarely reported. Derailments of passenger trains which cause but trifling delay, and no damage to rolling stock or persons, often are not reported. But nearly all accidents that cause loss of life or serious injury to any one, and most that cause the destruction of rolling stock, or any long delay of passenger trains, are reported; and of accidents of this kind, our record, we believe, is pretty complete. It is a list of the kinds of accidents which do most harm, and as such has a special value.

Of course, our sources of information being what they are, we can be by no means sure that each accident is properly described or has the true cause assigned to it. But this is not likely to make much difference with the aggregates and the averages, in which the chief value of the record is found.

The number of accidents of certain kinds in this country has a close relation with the weather, as we have shown from time to time, and as is indicated to some extent by the following table:

Number of Train Accidents Each Month for Seven Years.											
	1873.	1874.	1875.	1876.	1877.	1878.	1879.				
January.....	178	108	131	60	147	75	113				
February.....	133	90	211	91	56	67	88				
March.....	112	89	122	109	58	49	61				
April.....	101	59	60	59	89	46	50				
May.....	79	89	54	64	46	50	37				
June.....	90	83	61	52	49	56	64				
July.....	90	64	73	79	53	54	81				
August.....	150	73	114	78	98	75	79				
September.....	106	89	116	106	84	76	78				
October.....	88	81	88	103	82	61	104				
November.....	76	82	87	96	83	68	86				
December.....	80	74	84	88	66	63	69				
Total.....	1,283	980	1,201	982	891	740	910				

When cold and snowy weather prevails, there is always a material increase in the number of accidents. Last January, for instance, was the only snowy month of last winter, or the only one when traffic was much interrupted by snow on many roads. January in 1878 was mild, and so on. Great rains in spring and summer, causing floods, are also frequently attended with numerous accidents.

Last year was generally favorable, so far as weather is concerned, except in the month of January. The large number of accidents in the fall months, as compared with the previous year, is probably chargeable to the very heavy traffic, which brought into use all the rolling stock that could be made to run, increased somewhat the number of trains, and probably set to work some train-men with less than the average experience, as must always be the case when traffic is exceptionally heavy.

The numbers of train accidents and of persons killed and injured by them reported in our record for each of the past six years have been:

	1873.	1874.	1875.	1876.	1877.	1878.	1879.
Accidents.....	1,283	980	1,201	982	891	740	910
Killed.....	276	204	234	328	214	204	185
Injured.....	1,172	778	1,107	1,097	1,047	756	709

The fact that the number of accidents is materially greater (23 per cent.) than in 1878, while there is a decrease in the number of killed and injured, is noticeable. The number of accidents, however, though larger than in 1878 or 1877, is smaller than in any of the four preceding years. The numbers of killed and injured are the smallest that we have ever reported. In 1873, when the mileage of railroads in the country was less by some 12,000 miles, there were nearly one-half more persons killed and 65 per cent. more injured by train accidents. So much depends upon a few particularly serious accidents that we cannot judge whether progress has actually been made by the fact that the fatalities are less in a given year than in its predecessor. But, following down a series of years, and knowing something of the activity of traffic, mileage of roads, etc., we may trace the general tendency. This has certainly been favorable, though the largest number of deaths reported was in 1876. In these seven years the mileage of railroads in this country has increased more than 15 per cent., and the freight traffic has grown materially. It is doubtful whether there has been much increase in train mileage, however, and the risk of accidents is rather in proportion to the number of trains than to the amount of traffic. The most evident change in the material condition of railroad property has been a great improvement in the average condi-

tion of the tracks and road-beds. Steel has taken the place of iron on most tracks where trains are numerous, and very much more attention is paid to keeping roads in good condition. The introduction of appliances for preventing accidents or rendering them less disastrous has also made considerable progress, train brakes being now generally in use on passenger trains, and something having been done to improve signals, etc. (leaving abundance of room for further progress). It is also probable that a certain amount of progress has been made in the delicate art of operating a railroad. It must be remembered that in 1873 nearly one-fourth of the railroad system consisted of new roads, a large part of which were poorly built, while their officers and employes had not been fully trained to their work.

The number of accidents causing injury to many persons was not great in 1879. In 1878 one-fourth of the killed and 28 per cent. of the injured were the victims of three accidents—the Tariffville bridge disaster and the Mingo Junction and Wollaston collisions. The most serious accident in 1879 was the Jackson collision, Oct. 10, by which 15 persons were killed and 29 injured.

The classification of the accidents of each of the past seven years according to their nature or causes gives the following results:

	1873.	1874.	1875.	1876.	1877.	1878.	1879.
COLLISIONS:							
Rear.....	306	142	159	159	141	131	187
Butting.....	80	70	96	94	104	87	102
Cattle on track.....	17	13	15	18	19	31	31
Unknown.....	1	1	11	11	15	23	72
DERAILMENTS:							
Unexplained.....	192	175	177	185	222	218	315
Broken rail.....	56	17	46	50	107	42	111
Misplaced switch.....	80	48	70	89	81	67	72
Cattle on track.....	35	30	43	46	51	45	54
Wash-out.....	11	39	17	40	44	10	30
Loose or spread rails.....	19	29	41	43	40	16	13
Broken axle.....	30	18	43	38	39	29	31
Accidental obstruction.....	24	36	22	36	27	31	44
Snow or ice on track.....	22	13	25	16	35	13	9
Broken wheel.....	21	5	12	22	33	30	26
Broken bridge or trestle.....	17	21	21	20	26	33	19
Malicious obstruction.....	11	15	11	11	21	22	11
Broken truck.....	11	13	9	10	15	8	7
Broken or defective switch.....	2	1	6	4	15	12	10
Land-slide.....	7	4	11	9	11	..	..
Broken or defective joint.....	2	2	2	1	10	5	3
Broken or defective frog.....	2	2	3	3	6	8	4
Wind.....	3	1	2	2	7	7	16
Rail removed or displaced.....	4	5	7	7	8	7	16
Broken parallel or connecting rod.....	..	..	..	..	5	..	..
In making flying switch.....	..	..	..	2	4	..	..
Failure of coupling or draw-bar.....	2	4	1	1	3	7	9
Broken car.....	..	1	1	2	3	..	..
Runaway engine.....	1	2	1	..	3	1	2
Running through siding.....	3	6	3	..	..	..	..
Loose wheel.....	2	..	1	3	2	4	3
Open drawbridge.....	2	4	4	3	2	6	4
Bad track.....	..	..	..	4	2	13	7
Fall of brake or brake beam.....	..	..	..	..	..	4	9
Careless stopping or starting.....	..	..	..	..	..	3	..
Overloading car.....	..	..	..	1	..	3	..
Bad switching.....	..	..	..	..	..	..	..
Running over man.....	..	..	..	..	..	..	2
Flood over track.....	..	..	..	..	..	..	..
Others (one each).....	2	3	4	1	3	11	7
ACCIDENTS WITHOUT COLLISION OR DERAILMENT:							
Boiler explosions.....	17	11	15	19	26	14	16
Cylinder explosions.....	1	1	..	3	3	4	8
Broken parallel or connecting rod.....	15	11	13	7	14	8	11
Broken axle.....	1	..	1	2	13	..	..
Cars burned while running.....	4	18	7	11	10	16	2
Broken tire.....	3	..	1	..	9	..	..
Broken crank-pin.....	..	..	1	..	2	..	..
Flue collapsed.....	1	..	3	..	1	4	..
Other breakages of rolling stock.....	1	..	2	4	5	10	19
Steam-chest explosion.....	..	..	..	..	..	2	..
Flue-plug blown out.....	..	..	..	..	..	2	..
Failure of bridge or trestle.....	..	..	..	..	..	2	..
Mass falling on running train.....	..	..	1	1	..	2	2
Accidental obstruction.....	..	..	..	..	..	..	11
Malicious obstruction.....	..	1	..	1	..	..	3
Unknown.....	..	..	..	..	..	2	9
Totals.....	910	740	891	982	1,201	980	1,283
RECAPITULATION.							
Collisions.....	510	259	298	279	278	300	302
Derailments.....	557	451	581	655	840	654	815
Other accidents.....	43	39	42	48	83	66	76
Totals.....	910	740	891	982	1,201	980	1,283
Average number per day.....	2.49	2.03	2.44	2.69	3.29	2.68	3.51

The number of collisions, therefore, was larger last year than in any other of the seven, which is a very unfavorable feature. Derailments are largely due to defective roads and equipment and unforeseen obstructions; but collisions are chiefly chargeable to bad management and discipline. There is always neglect somewhere, when there is a collision. But the chances of collisions increase greatly with the frequency of trains and the difference in their speeds, especially on single-track roads, so that there may be an increase in the number of collisions without any deterioration in the management or discipline. Of course the danger is greatly increased where new and comparatively unskilled men are employed in train service, which is more or less the case when business is growing.

The increase in the number of collisions is in rear collisions. There has been but one year before that the number of butting collisions was so small. Of the 310 collisions, 29 were between two passenger trains, 82 between a passenger and a freight train, and 199 between two freight trains. Of the 185 persons killed and 709 injured by the 910 accidents, 64 were killed and 286 injured by the 310 collisions, which on the average were not so very much more fatal than the derailments. Nineteen of the collisions (as well as 80 of the derailments) were due to misplaced switches, 50 to trains breaking in two, and 13 to fog.

Most of those ascribed to the breaking in two of a train occurred in the latter part of the year (twelve in October alone), when many roads had all the traffic they could handle, and were doubtless often tempted to make trains too large. In 1878 out of 220 collisions 28 were ascribed to trains breaking in two and 19 to misplaced switches. There is a general tendency in the country to get more powerful locomotives and haul larger trains, and the number of accidents caused by the parting of trains indicates that the draw-gear has not been strengthened in proportion to the lengthening of the trains.

The number of derailments is larger in 1879 than in 1878, but smaller than in any other year of the seven. Those from broken rails were more numerous than for three years before, and have been exceeded in but two years of the seven. It was to be expected that these would be more numerous than in 1878, because there was a cold and snowy January last year, when such accidents are most frequent. But there was only one month of very bad weather in 1879, in which about one third of the whole number of accidents from this cause occurred, and nearly two-thirds of the whole number were in the first quarter of the year. The numbers of derailments from this cause in the cold and hot quarters of the year are given below for the past seven years:

Accidents from Broken Rails in the First and Third Quarters of the Calendar Year, for Seven Years.									
	1873.	1874.	1875.	1876.	1877.	1878.	1879.	Total.	
First quarter.....	65	20	90	26	26	7	31	208	
Third quarter.....	5	5	3	5	7	2	5	32	

That is, in the aggregate for the seven years, there have been *eight and a-half times as many* accidents from broken rails in the quarters including January, February and March as in the quarters including July, August and September.

Of the derailments for which causes are assigned, the percentage due to each of the chief causes was as follows in the several years:

	1873.	1874.	1875.	1876.	1877.	1878.	1879.
Broken rail.....	15.3	5.6	11.4	10.6	12.3	9.9	22.2
Misplaced switch.....	21.9	15.7	17.3	18.9	13.1	15.4	11.1
Cattle on track.....	9.6	9.8	10.6	9.7	8.2	10.3	10.8
Wash-out.....	3.0	11.8	4.2	8.5	7.1	2.3	6.0
Loose or spread rails.....	5.2	9.5	10.1	9.2	6.5	3.7	2.6
Broken axle.....	8.2	5.9	10.7	8.1	6.3	4.6	4.2
Accidental obstruction.....	0.6	8.5	3.4	7.7	6.0	11.7	8.8
Broken wheel.....	5.8	1.6	3.0	4.7	5.3	4.6	5.2
Broken bridge.....	4.7	6.9	2.4	2.0	2.2	3.4	1.5

The proportion of derailments from misplaced switches is greater than ever before, and to these 80 derailments must be added 19 collisions due to this cause. A very large proportion of these could doubtless have been prevented by the interlocking system. In eleven cases, the switch was misplaced maliciously.

A more general classification of the causes of derailments gives the following:

	1873.	1874.	1875.	1876.	1877.	1878.	1879.
Defects or failures in permanent way.....	200	146	201	185	137	72	94
Defects or failures in rolling stock.....	73	63	101	76	67	42	64
Negligence or malice.....	96	107	114	119	97	82	101
Unforeseen obstructions.....	111	100	142	107	113	110	99

The number of each class of trains involved in collisions, derailments and other accidents, and the number of the killed and injured under each head were:

	Colli- sions.	Derail- ments.	Other ac- cidents.	Total.
Accidents:				
To passenger trains.....	29	190	21	240
To passenger and freight.....	82	—	—	82
To freight trains.....	199	367	22	588
Total.....	310	557	43	910
Casualties:				
Killed by.....	64	97	24	185
Injured by.....	286	380	34	700
Killed and injured by.....	350	486	58	894

Two trains being involved in each collision, we have accidents to 351 passenger trains and to 869 freight trains during the year. The number of freight trains is probably three or four times as great as the number of passenger trains, but a much smaller proportion of the freight-train accidents is reported.

Though the record for 1879 is better than in most of the preceding years, it is by no means a good one, and in some respects is decidedly unfavorable. It is, however, an excellent record to improve upon, and we sincerely hope that we may never have so bad a one to publish again.

LOCOMOTIVE BOILER EXPLOSIONS.

Last week we gave some statistics of the number of locomotive-boiler explosions that have occurred in this country and been recorded during the last eight years. The number during that time was 139. Estimating the injury to life and limb in the same proportion to that due to this cause last year, we would have a total of 179 killed and 204 injured during the period covered by our record. Probably this is not complete, and doubtless some of those reported injured ultimately died from the effects of their wounds. It is impossible, in an article like this, to give even the faintest idea of the suffering represented by these figures. One glimpse of a single victim in the agony

which is usually caused by such accidents would convey an impression such as the most vivid description could not produce. Whatever will help to diminish the amount of this terrible anguish is worthy of the most serious attention of all who are in any way responsible for it.

As stated last week, a very large proportion of these explosions are preventable, and therefore, although the subject is a very old one, it is well to call attention to it repeatedly, and some space will be devoted to a consideration of the means which can be adopted to prevent such disasters.

The cause of, perhaps, nineteen explosions of locomotive boilers out of twenty is included under one of the three following heads:

1. Corrosion or cracking of plates.
2. Insufficient or badly designed bracing.
3. Broken stay-bolts.

The cause of the first of these may in turn be attributed to three distinct sources: (a), impure feed-water; (b), mechanical, and, probably, in some cases, (c) galvanic action.

The obvious remedy for the first is to provide pure water when that is possible. When it is not, the only thing which can be done is to take precautionary measures so as to detect any dangerous weakness whenever it occurs. Next to impure feed-water perhaps the destructive effects of mechanical or bending action—or rather the combined action of the two—is the most frequent cause of weakness in steam boilers.

At the risk of repeating what has been said a great many times before, attention will be called to the manner in which this joint effect is produced. Every master mechanic who has ever examined any considerable number of old boilers has noticed the insidious effects of corrosion on the plates. Generally this assumes one of three forms: pitting, or corrosion, which takes place on the surface of the plate; channeling, grooving or furrowing, which occurs at the inner edge of lap-joints, above the mud-ring, next to the tube-sheets, and at the corners of the fire-box casing, at the feet or attachments of braces and stays to the boiler plates, or in short, wherever the latter are subjected to a bending or cross strain; and, lastly, cracking, which occurs at the same localities as grooving, and which is often very difficult to detect. It seems probable that both pitting and furrowing are in part due to the action of solid or gritty substances, as sand, which are held in suspension in the water in the boiler, and which act by attrition caused by the circulation of the water, somewhat as the sand-blast does. It is a well-recognized fact, though, that neither grooving nor cracking ever occurs unless the feed-water is of a corrosive character; but, as stated before, it is the combined action of chemical and mechanical causes to which in nearly all cases it is due.

Obviously, when it is impossible to procure feed-water which is not of a more or less corrosive character, the only remedy to prevent the grooving or cracking of plates is to remove or prevent the mechanical action.

To make the nature of this clear to some of our readers, a little explanation may be needed of well known and often described facts and phenomena. Thus, if two pieces of boiler plate are riveted together, as shown in fig. 1, and are put into a testing machine and subjected to a sufficient tensile strain, they will



assume the form shown in fig. 2, that is, the plates having a tendency to draw in a straight line will be bent along the edges of the lap, as shown at *a* and *b*. This occurs in the seams of a boiler every time the latter is subjected to pressure. The effect is that the fibres or particles of iron are freshly exposed to the chemical action of the water every time this bending occurs, which probably disturbs the scale or coating of the metal which would otherwise protect it more or less from the attacks of corrosion. Besides this, when a lap-joint is subjected to a tensile strain, the effect is, owing to its form, to concentrate the strain on each plate at the edge of the overlap, so that the fibres at that point must resist a greater force than anywhere else. The tendency then is to break those at that point first. This action can be illustrated by taking a piece of thick writing or drawing paper a half-inch wide and five or six inches long. By taking hold of this at each end, if it is good paper, it will require almost as much force as any one can exert to tear it apart by a direct

pull. Now take a piece an inch wide and cut into it with a pair of scissors crosswise, at the middle, about half way through. There will then remain as much paper to be torn apart as there was in the half-inch piece, but a very slight pull will tear the piece an inch wide if it is cut as described. The reason of this is that the strain is concentrated at the inner edge or root of the cut, and the fibres there are thus broken, as it were, in detail. An exactly similar action occurs with a lap-joint, but, as indicated before, the fibres under the greatest tension are also probably weakened by the chemical action of the water, and thus they are gradually separated and a groove or crack is thus formed.

In a report to the Manchester Steam Users' Association, made in February, 1869, Mr. L. E. Fletcher, its Chief Engineer, says: "This furrowing is due to the corrosive action of the water, combined with a constant buckling movement in the plates, caused by the varying pressure of steam. This movement would not occur if the barrels were truly cylindrical, and so constructed that the line of strain ran through the centre of the plates, when changes of form could not take place with changes of pressure." In a report on a locomotive-boiler explosion made by him the same year he says: "Furrowing always takes place to a greater or less extent when an alternate hinging or buckling action occurs combined with the use of a corrosive feed-water."

In a paper read by Mr. Wm. Kirtly, Locomotive Superintendent of the London, Chatham & Dover Railway, before the Institute of Mechanical Engineers, he said:

"The special corrosion of the plates at the joints is to be attributed to the combined operation of chemical and mechanical causes, the chemical action of the water in the boiler being concentrated upon those particular parts in consequence of the mechanical action produced at these parts by the strain upon the plates. That the combination of these two causes is requisite for producing this effect is shown by the middle of the plates being free from it where they are exposed to the chemical action alone, without the mechanical action; and further by the joints in the upper part of the boiler above the water line being also free from it when exposed to the mechanical action alone without the chemical action. The removal of one of these causes will therefore be sufficient."

Both the grooving and the cracking of plates seem to be due to the same causes, or at any rate occur under the same conditions, and it seems as though the cracking were only a more rapid action of the same processes which produce grooving. It occurs not only at the edges of lap seams, but above the edge of the mud-ring, along internal or external braces, stays or crow-foet, or any attachment to the boiler which exerts a cross or bending strain on the plates.

It would lead too far, or rather over too great an area, to discuss the nature of the corrosive agents which act on the plates of steam boilers, but as Wilson says in his treatise, "Whether the plates in the steam space are attacked or not will depend upon the nature of the acids, whether they are volatile or not, or whether the liquid acid is carried into the steam space by priming." As a matter of fact, though, in which we are chiefly concerned at present, it has been found, as Wilson states further, that grooving "is most marked at the bottom of the barrel, and diminishes gradually, until it dies away near the centre line; * * * moreover, it only rarely takes place above the water line."

Mr. J. M. Boon, Master Mechanic of the Pittsburgh, Ft. Wayne & Chicago Railway, gives the following testimony:

"I have never seen any signs of grooving or pitting above the water line. During the past two years I have broken up seventy-two old locomotive engines, from 12 to 14 years old, all of which I have examined carefully for my own information, and the above is the result. I have not found any cracks along the horizontal seams above the water line, excepting in some cases, when welt seams were used."

Mr. Hayes, of the Illinois Central, says that he "thinks neither grooving nor cracking ever occurs above the water line, or, if they do, it is very seldom."

Other master-mechanics, though, say that plates above the water line are as liable to crack as below, but all are agreed that grooving does not occur above. Generally, though, we have found that, on close investigation, the cracks which occur above the water line are along seams so low down that they are exposed to the action of the water.

The foregoing facts and considerations, therefore, lead to the conclusions that, as grooving and cracking are due to the combined action of chemical and mechanical causes, they will be either entirely prevented or very much diminished,

1. If pure feed-water is used.
2. If the seams are placed so far above the water line as not to be exposed to the action of the water.
3. If boilers are well made, truly cylindrical, and the

* In these cases the cracks occurred, very singularly, on the outside of the plates opposite the edge of the welt.

seams constructed so as not to produce any cross strain or bending effect on the plates.

The discussion of the means to be adopted to accomplish these results must be reserved for a future article.

TRAFFIC STATISTICS.

If railroad employes in the clerical branch of the service have a decided antipathy concerning any portion of their work, it is usually in relation to the preparation of statistics. That the compilation of statistics is very dry and tedious work, no one will be likely to deny; still they are a necessity, and are very essential in forming an accurate opinion in relation to many matters pertaining to the operation of railroads, furnishing as they do in many cases the necessary data from which to decide what will be the most proper action to take on matters of vital importance to the welfare of the roads.

Formerly it was considered by many that the prime object of preparing statistics was to make a sinecure position for some favorite of the President or an influential director; and that so far as the statistics generally prepared being of any use or benefit to the road, they might as well have been so many pieces of blank paper. A railroad officer tells how, upon one occasion in his earlier railroad experience, when in conversation with one of the officers of the small road with which he was then connected, that gentleman, in describing what he termed the "red-tapeism" on railroads, said: "Though you may hardly believe it, it is no less true that on some of the large roads they are endeavoring to keep the mileage of car-wheels. This is merely done because some official may have a friend that he wishes to provide for, and does not know what else to set him at."

However, at the present time, intelligent railroad officials are investigating with great care, and by full and true records of experiments and regular workings, what economies may be introduced in relation to many points connected with their business; and the fact that they are making these investigations is considered as good evidence that they have sufficient interest in the property under their control to inquire into the workings of all branches of the service. Not only is wheel-mileage frequently kept, so that by the result shown by the record kept of the service performed by wheels of different manufacture and composition they may determine what kind of wheel they can use with the greatest economy; but records are kept and statements compiled to demonstrate the true theory in relation to the economic use of fuel, the relative qualifications of different styles of engines, the life and wear of various makes and patterns of rails, the comparative cheapness and durability of different kinds of ties, and, in fact, on many other points of interest to the railroads of use in their economical operation.

No one now disputes the great value of records, such as above; but it may be of profit to push the collection of information still further, and in a direction to which, probably, the attention has not been given that its importance entitles it to. This is in connection with the traffic department. A person would hardly endanger his reputation for veracity in stating that there are very few traffic managers in this country that have at their command the amount and variety of trustworthy information they should have in regard to facts that have greater or less bearing on the great and weighty interests over which they have control. Beyond a few statistics showing the tons of freight carried, the number of tons carried one mile, the classification of freight carried, the tonnage from and to each station, the tonnage of a very few important items of freight from a particular station, and, possibly, a few other statements of similar import, in the majority of instances they have no authentic and reliable information bearing on their freight traffic. So far as the passenger traffic is concerned, the data that they can command are probably still more meagre.

The above information is undoubtedly valuable as far as it goes, but it is not sufficient foundation on which to construct any policy or arrange any tariffs. Many railroad managers appear to hold to the idea that all that is necessary is to make rates as low as rival lines on competitive business and get out of non-competitive business as high rates as possible. But the railroads hold a more exalted and honorable position toward the business interests of the country, and they are a very important factor in the advancement of national prosperity. This being the case, anything tending toward the formation and adoption of intelligent and liberal policies on the part of the railroads cannot help being of advantage to the public and will naturally be of value and profit to the stockholders.

Intelligent policies can only be formed on a thorough knowledge of all the facts having any bearing on the

question, and the requisite knowledge can only be obtained by experience and the acquisition of information from all sources open to the parties interested. In this connection the following suggestions are offered:

That besides the statistics usually obtained from and in relation to the operations of a road, it might be well to have in some convenient and systematic form all the trustworthy data in relation to the general business, facilities and special advantages of the section of the country tributary to the road, and to what other points and by what other routes business from the territory was diverted, and all the possible data as to the specific articles and the quantities that were diverted. The information in relation to the general business, amount, kind, etc., could be gained, in part, from the various annual state reports on the manufacturing, commercial and agricultural interests; from local investigation and inquiries made of parties thoroughly conversant with the several interests in the different localities; through general information that can be collected, little by little, by the station agents and other employes of the road; and from the many other sources opened up by a closer communion and acquaintance between the railroad authorities and their patrons.

Then, again, there should be kept a detailed account of the earnings and tonnage of each station, that would show the tonnage, local charges and forwarding point of each important article of freight received at that station, and the tonnage, local charges and destination of each important article of freight forwarded from that station. The minor articles in both instances need not be specified with elaborate details. The importance of the various articles could readily be determined by ordinary knowledge of the traffic of the road. The fact that the revenue would be shown twice—once by the forwarding station and once by the receiving—would not materially affect anything, as the total earnings would not be made up from these statements.

The keeping of these statistics and the compilation of these data would naturally cause considerable additional work, and, possibly, entail some expense; and it is only reasonable to inquire of what special benefit they would be.

Would they create any new business, or would they be of any material assistance in the retention of business now held? In maintenance of an affirmative reply to these questions the following is presented:

In the first place, the statistics in relation to the various articles of freight forwarded or received at any particular station for a given time could be compared with the same period of time during preceding years, and if any marked decrease in the trade be shown, the necessary investigation could be made; and, if it was in any way through the fault or oversight of the railroad, or through its requiring too high rates, the matter could be adjusted so that a further decrease in the future could be prevented. If, on the other hand, a comparison of the statistics with those for the same period of time in preceding years should show an increase in tonnage or revenue from any particular item of freight, and investigation proved it to be the result of the liberal rates given by the road in that instance, it would be likely to encourage the adoption of the same policy in similar cases at another time. It would take but very few such opportunities to amply repay any expense incidental to the preparation of the statistics.

The data in relation to the general business of the territory along the line and in the vicinity of the road will be found useful in many ways.

This country has now become so well supplied with means of transportation in the more densely populated sections of the country, that the greater proportion of important traffic is not dependent on any one outlet for transportation. Then it is very essential that the managers of a road know as nearly as possible what the tonnage to be moved from the different localities along or near his line may be. It is not only necessary that he know what amount of traffic his road is getting, but that he have approximate knowledge, at least, of what the total traffic from and to these points may be. Then he can determine whether he is getting the proportion of the trade to which he is fairly entitled, and can make a fair estimate as to whether the profits that may be derived from the additional trade that he may be able to divert from competing lines by a reduction of rates will counter-balance the loss consequent on any reductions that he may be forced to make on trade he now has, should he attempt to divert trade from his competitors.

Again, there is sometimes traffic of considerable value that for certain reasons could be taken from a rival line with very little exertion, and the temptation to ac-

quire it is very strong; but a review of the statistics at hand in relation to the business may demonstrate that its value is not of sufficient importance to offset the loss of other business that might result at some vulnerable point along the line, should the rival line become bent on retaliation. Of course, without any detailed statements as herein advocated, the management may have the necessary knowledge to form a correct opinion in the matter; still, even in this case the statements would be of no injury, and a reference to them would be likely to sustain the management in the course of action that might be decided upon. Then, again, the opinion of the management might only be general impressions, based on no specific and detailed facts at its command, and an inspection of the correct figures might prove that its impressions were positively erroneous. In that event, the statements would certainly be of great value.

Another occasion when this knowledge would be exceedingly useful would be when shippers come claiming that if they are given certain inside rates and special advantages and facilities, they would be able to give the road a great amount of freight—an amount far greater, indeed, than there would be any possibility of their giving the road, and would, probably, exceed the total tonnage of that species of freight from the locality from which they came. The truth of this could be clearly shown through the statistics and data that the manager would have at his command. The shipper may present his claim with all honesty of purpose and with the utmost confidence in the truth of his assertions; for it has been often proven that a sanguine man is prone to exaggerate when his interests are at stake, even when he may desire to be truthful.

The great amount of general knowledge that the manager could acquire through the compilation of these statistics in relation to the natural advantages and resources of the country contiguous to his road might suggest to him new enterprises that might be started and new industries that might be created, from which his road could secure increased revenue; and when advocating them before the proper parties, he would have the facts in his possession to verify his statements and sustain the soundness of his judgment.

It may be claimed that any manager of proper experience and suitable capacity has about all the information necessary on these points in his head.

While a good and retentive memory is very valuable to a railroad manager as well as to other people, if he trusts to memory solely, just when he wants any important facts they are likely to escape him. Let his memory be ever so good, he will be none the worse off by having all the information possible, systematically arranged and classified, so that he can refer to any particular matter at short notice, and find full details of the same; and, if the facts coincide with his memory or not, he will have the satisfaction of knowing that the knowledge thereby obtained is probably authentic. Correct and extended information on all points is what all intelligent and earnest railroad officers desire, and in relation to traffic, the benefits to be derived from the use of classified information as herein advocated must be apparent to all. The advantage obtained from their use in one transaction alone might often exceed the cost of their preparation for a long period.

The Report of the New York Assembly Investigating Committee.

We give a good deal of space this week to the report of the Special Committee of the New York Assembly, which has devoted a large part of the past season to the investigation of complaints against the New York railroads, in the course of which it has taken the testimony of the leading railroad men in the state, as well as of those who had complaints to make against the railroads. The great mass of testimony taken by it, covering more than 5,000 printed octavo pages, is in many respects comparable to the vast volumes of evidence accompanying the "Amalgamations Committee Report" of the British Parliament, or of the Royal Commission on Railways, taken about 1865, which are at this day the chief sources of information concerning the commercial management and economic features of the British railroad system. A large amount of evidence was given by Mr. Albert Fink, Mr. George R. Blanchard's evidence covered nearly 800 pages; Mr. Wm. H. Vanderbilt, Mr. Edwin D. Worcester, Mr. James H. Rutter, Mr. Stephen Little and others familiar with New York railroad history, gave testimony as to facts and experience; and important contracts hitherto kept secret, such as those of the railroads with sleeping-car companies, fast-freight lines, express companies, stock-yards, the Standard Oil Company, etc., were presented. Counsel was employed to represent the complainants, and to see that

the investigation should be thorough on that side. The committee visited different cities where complaints were made, that every opportunity might be given for presenting all grievances. It has certainly had such an opportunity of ascertaining the actual practices in the commercial operation of railroads as no other body of men ever had.

Although we give so much space to the committee's report, we are able to give but a summary of it after all, and some important portions are almost wholly omitted. It has not yet been ordered printed by the Legislature, and unfortunately the accounts of the bills which the committee has submitted with its report are even more abridged than the report, so that we cannot now comment upon the committee's action as we could if we knew more precisely what that action had been.

The report, however, is an able and generally fair document. The facts ascertained in the course of the investigation are presented, the practices complained of are explained, and those really objectionable are ascribed generally to the causes which have actually led to them. It is noticeable that, without exception, we believe, all those things which had been brought up as reflecting upon the integrity of the railroad officers were found to be perfectly legitimate, or at least not to reflect in any degree upon the present administrations of the roads. The fast freight lines, where not strictly cooperative (as most of them are), were found to be specially advantageous to the New York roads; the Wagner sleeping-car contract with the New York Central was the most favorable one of the kind in the country, and one against which the public has no cause of complaint; generally the evidence showed that contracts were not made so as to give special advantages to individuals, to the injury of the railroad companies or the public.

In its recommendations, the committee profess themselves profoundly impressed with the difficulty of effecting what it thinks it desirable to be done, partly due to the nature of the problem, and partly to the limited jurisdiction of the state which, may drive traffic to roads out of the state by measures intended only to prevent discriminations within the state. In spite of this, however, the committee recommends the prohibition of a greater charge for a short haul than for a longer one on similar freight in the same direction—a prohibition which cannot be justified economically, even where the railroads are all under one jurisdiction or a single management, and which would put the roads subject to it to a great disadvantage when competing with roads outside of the state not subject to such a regulation.

The committee are decidedly of the opinion that all rates should be public and should be uniform to all shippers under similar circumstances, without any greater deduction in consideration of the quantity shipped than the reduction in the expense in receiving and discharging it; but in view of the competition of railroads outside of the state, it does not venture to recommend that the roads should be compelled to publish all their rates and the changes in them. Secret rates, drawbacks and rebates, however, it would forbid.

Feeling it unwise to prescribe with any minuteness how the business of the railroads shall be conducted, and yet believing that the public should have the means of guarding against preventable evils, the committee recommend the appointment of a railroad commission, to have substantially the same powers and duties as those of the Massachusetts Railroad Commission—that is, with authority to require reports and to investigate and to report the results, with their recommendations, to the Legislature; or, if the railroads have violated existing laws, to the Attorney-General. This is a radically different thing from a commission which has authority to regulate directly by giving orders to the companies as to what they shall or shall not do, which would be a most dangerous power. The commission which only investigates, reports and recommends, carries only so much weight as its character and its arguments command. It is able to find whether complaints are justified, and it formulates and gives voice to well-founded public opinion. We do not believe that there is any reasonable objection to a commission of this kind, and it may be very valuable to the railroads as well as to the public. It is true that its value would depend almost entirely upon the character of the men appointed as commissioners, and that in New York there is great danger that they would be appointed for partisan services, in which case they would almost certainly be useless. But a useless commission of this kind would not be a harmful one, as it would be if it had the direct power of regulation. At worst, it would only cause petty worry and little expenses; while with matters as they are, there is always danger that some crude and irrational legislation may

cause great injury to the railroads of the state. With a capable railroad commission, there would be little danger of any grossly unjust railroad legislation thereafter. The committee recommends that the commission should, "as does the English commission, give a representative to the railroads as well as to the public." This we do not believe in. The commission certainly should have an expert in railroad business—in the management of traffic—as one of its members; but he should be a representative of the public the same as the others, as is the case with the railroad member of the British commission. It is a mistake to confound railroad officers with the railroad interest—with railroad proprietors. Most railroad officers have little or no direct interest in railroad property, and many are very decided advocates of the rights of the public, and sharp critics of the acts of railroads which are most complained of—rather inclined to take up the public side in cases of controversy.

The Assembly Committee submitted with its report six separate bills, some of which propose wholly new legislation, and the others modifications of existing laws.

The bill to regulate the transportation of freight aims simply to prevent any discrimination in rates or privileges among different shippers under similar circumstances. It prohibits any greater charge for shipments from the same station in the same direction any given distance than for a greater distance, and any higher rate of charge for a single car-load than for a greater number, except that an allowance may be made for trains of not less than 20 car-loads received from a connecting road which is partly in another state consigned to the same station, and requiring no terminal handling where received, which allowance may not be greater than cost of loading the cars where received.

The bill providing for a Board of Railroad Commissioners makes it the duty of the Board to examine the roads and their manner of operation, to see that they comply with the provisions of their charters and the laws of the state, to investigate the causes of accidents which occasion death or injury to persons, and gives them power to examine the books and affairs of railroad companies, and compel the production of books and papers, etc. If they find that any company is violating the law, they must first notify it, and if the violation continues, then present the fact to the Attorney-General, who will use his judgment as to further proceedings. When the commissioners find that any improvements, additional accommodations, changes in rates or methods of doing business should be made on any road, they are to notify the corporation in writing, and if it takes no action thereon, they will present the facts to the Attorney-General, and also make a report thereon to the Legislature. They are authorized to prescribe the form of annual report to be made to the state, giving six months' notice of any changes.

A bill regulating the consolidation of railroad companies requires that the consent of the Legislature be obtained before a consolidation can be executed, and that it must be made subject to such conditions as the commissioners may impose.

A bill regulating the voting of stock and bondholders provides that persons voting on their own securities may be required to take oath that they have not been paid for their votes, and those voting as proxies may be required to swear that the securities on which they vote are really owned by the persons in whose names they stand. The proxies must be executed within the three months before the election, and no one may vote on stock which he holds as security.

British Rail Exports.

The exports of railroad iron of all sorts from Great Britain for the past ten years are reported as follows by the Board of Trade, in tons of 2,240 lbs.:

	1870.	1878.	1870.	1878.
To Russia.....	38,487	59,887	8.3	13.6
Sweden and Norway.....	14,331	23,692	3.1	5.4
Denmark.....	5,046	5,044	1.1	1.1
Germany.....	3,560	37,065	0.8	8.8
Holland.....	8,114	116	1.8	..
Belgium.....	28	226	..	..
France.....	114	88	..	..
Spain and Canaries.....	14,321	24,828	3.1	5.6
Italy.....	36,767	18,982	8.0	4.3
Turkey.....	1,030	422	0.2	0.1
Egypt.....	2,957	2,914	0.6	0.7
United States.....	44,968	681	9.7	0.1
Brazil.....	31,913	15,447	6.9	3.5
Peru.....	2,950	3,539	0.6	0.8
Chile.....	803	1,411	0.2	0.3
British North America.....	64,423	34,614	13.9	7.9
British India.....	88,142	104,221	19.0	23.7
Australia.....	55,049	75,407	11.9	17.1
Other countries.....	50,092	30,068	10.8	7.0
Total.....	463,035	439,392	100.0	100.0

The increase in total exports is not very great—only 5.4 per cent. In 1878 nearly one-half of the entire exports (48.7 per cent.) was to British colonies, or countries under British rule; in 1879, 44.8 per cent. was to these colonies. In 1878

38.8 per cent. went to other European countries; in 1879 only 26.4 per cent. The total exports to all countries in America were 55,792 tons in 1878, (12.6 per cent. of the whole), and 145,087 tons in 1879 (31.1 per cent.) There was thus an increase generally in the American demand, and this increase amounted to just about as much to other American countries as to the United States (44,317 tons increase in exports to the United States and 44,978 tons increase in exports to other American countries).

Considering that Great Britain is the chief source of supply for rails to many countries, the total exports seem quite moderate. The "railroad iron" given in the list includes joints, etc., besides rails. Of rails alone the exports were 384,029 tons, which is little more than one-third of the estimated rail production of the United States in 1879. These British exports were sufficient for 4,362 miles of track laid with 56-lb. rails, which is something like the quantity used in the United States during the year for new road alone.

The total exports of steel and iron rails from Great Britain for the two years have been:

	1879.	1878.	Inc. or Dec.	P. c.
Steel.....	328,425	251,491	I. 76,934	30.6
Iron.....	55,604	107,568	D. 51,964	48.1
Total.....	384,029	358,759	I. 25,270	7.0

The total production of rails in Great Britain we do not find reported. The total capacity of its Bessemer works is given as 600,000 tons per year; but it is only during the last few months that they have been worked to their full capacity.

The average value of the steel rails exported is given as \$35.85 in 1878 and only \$28.60 in 1879; of the iron rails, \$29.75 in 1878 and \$31.13 in 1879.

Quotations Jan. 10 gave the prices of Welsh iron rails at Liverpool as £7 11s. 9d. to £8 6s. 9d., or \$37 to \$40.50. For steel we find no quotations, but as much as \$52 is said to be demanded, which makes the cost to import \$80 plus freight.

Record of New Railroad Construction.

This number of the *Railroad Gazette* contains information of the laying of track on new railroads as follows:

Burlington & Missouri River in Nebraska.—This company's *Republican Valley* line is extended from Bloomington, Neb., westward to Perth, 12 miles.

West Jersey & Atlantic.—Track laid from Newfield, N. J., eastward to Forest Grove Road, 5 miles.

Warwick Valley Extension.—Track laid from McAfee Valley, N. J., north by east to Vernon, 3 miles.

Chicago, Rock Island & Pacific.—The *Atlantic & Southern Branch* is completed from Atlantic, Ia., south to Lewis, 8 miles.

Cairo & Vincennes.—The connection with the Danville & Southwestern road is completed from St. Francisville, Ill., northward to Lawrenceville, 8 miles.

This is a total of 36 miles of new railroad, making 98 miles reported thus far in 1880—some of which may possibly have been laid last year.

Contributions.

Winter's Work on Track Repairs—Notes on the Condition of American Roads.

TO THE EDITOR OF THE RAILROAD GAZETTE:

Throughout a large portion of the country the fall work was thoroughly done, and I believe November never before found American railroads in as good condition as that month in 1879. Officers in charge of permanent way have learned the importance of a perfect system of drainage and of putting the track in perfect line and surface at the beginning of winter. Unfortunately, however, the late fall rains that have prevailed for an unusual length of time throughout the country have had a serious effect on the condition of the tracks, and many of them have frozen up very rough, and much shimming will be required. And what was worse than the late rains was the early snows that covered much of the country to a depth of a foot or more, and melting away gradually made porridge of poor ballast and spoiled much of the good work that had been done; and, in some states, a second storm came and went off slowly before the fall or winter rains set in. All this seriously affected the surface of most roads, although there are some so well ballasted and drained that but little damage was done comparatively; notably the Lake Shore & Michigan Southern and the Atlantic & Great Western. The former has the advantage of remarkably clean gravel, and what the latter lacks in this respect is made up largely in superior drainage. In this respect many roadmasters deem it sufficient to keep the ditches clean, but it is important that the form of road-bed be such as to allow a free passage of water from under the ties. This renders it necessary that the road-bed should be crowning in the middle and the ballast properly distributed. Of course after the track is laid and ballasted nothing can be done to give the bed under the track its proper form, but in laying new track a gang can be sent in advance of the tie-layers to fill up the wagon-ruts and put the surface in proper shape; then if the ballasting is done before the ties become imbedded into the clay, there will be no difficulty in keeping the track dry. When a tie has lain on a clay bed until it has settled half or the whole of its thickness, when raised for ballasting it leaves a trough the size of the tie to hold water, and so with wagon-ruts. Smooth slopes in cuttings and clean ditches are necessary to the maintenance of a good track, but it is of the utmost importance that water leaves from under the ties as quickly as possible. I noticed some track that was superb in line and surface, and the "dressing" exceedingly neat and tasty out to the ends of the ties. There, surplus ballast lay along in ridges, and where there should have

been a slope there were piles of gravel, giving the track the appearance of laying in a shallow canal. This track will be likely to give trouble before spring, as there is no escape for water. I noticed, also, where mud and stones had been removed from ditches and laid three or four feet up on elegant slopes. This looked decidedly bad, and this mud and the stones will soon find their way back into the ditches.

This is wandering somewhat from the subject, but I will mention here that the Atlantic & Great Western has a series of eight reverse curves so nicely laid and elevated that passengers do not notice the curve at a speed of forty miles an hour. I have noticed on some roads thirty curves with such excessive elevation as to frighten timid passengers who were accustomed to riding on tracks put up according to rule and with the use of the level.

Some of our roads have given up the practice of shimming. Old road-beds, with an abundance of good ballast and thorough drainage, with good care during the fall months, render shimming unnecessary, and the section work through the winter is confined to clearing away snow and ice, track-walking, keeping an eye, or, rather, both eyes, out for broken rails and frogs, and keeping everything "snug." This on the better class of roads, but we yet have some thousands of miles of road poorly ballasted and not ballasted at all, light rails, with a poor style of joint fixtures, and these roads are likely to give more than ordinary trouble during the present winter from broken rails and derailments. Much good shimming must be done on these roads to keep them in anything like working condition. Light rails with a poor joint support become gradually bent downward from the ends back to the secured or third tie from the joint. As the tie settles it carries the rail with it, and, being held by the spikes and the weight of the ties, with the frozen clay adhering to them, the heavy driving-wheels give the bent rails a "set," thus: ———. When the joints are raised and shimmed to a good surface, that portion which rested on the tie, acting as the fulcrum when the rails were being gradually bent, will, on the rails becoming straightened, be subjected to a powerful strain, with a tendency to crack the rail across the bottom of the base. Suppose the joint to have settled to such a depth that the rails are bent back to the fourth tie from the joint, the rails at the fourth tie will be nearly up to a good surface. The rails have been bent over this tie, it acting as a fulcrum and settling but a trifle; not enough, one would think, to need a shim. You raise the joint and shim three ties each side of it, and the rails have a solid bearing on them. The fourth ties were but a trifle low, and if the spikes had a fast hold on the rail and the ballast frozen, everything would appear all right, but if the spikes were started slightly from the claw-bar the rails would spring up from an $\frac{1}{8}$ of an inch to a $\frac{1}{4}$ of an inch from the ties, and unless a shim of proper thickness is placed on that tie a broken rail may be found there at no distant day. It is a matter of wonder to many why so many rails break on ties and so few between them, and this may explain: When the rails are being bent, a tie somewhere near the joint acts as a fulcrum and the weight which bends the rail causes a powerful vertical longitudinal strain tending to part the fibres transversely from the surface of the rail downward on the tie. When the rail is forced back to its normal position and shimmed, the strain is reversed, working across the base of the rail and upward; and this being repeated as trains pass, and the metal frosty, the fibres part and the rail is broken on the tie. From the time the shimming was done there has probably been a space of say $\frac{1}{8}$ of an inch under that rail on the tie, and as the bearing of the rail on the adjoining ties was good, the place for the rail to break was on the aforementioned tie where there were doubts in the mind of the section foreman as to the necessity of putting a shim. To prevent broken rails where track is shimmed it is necessary to shim on the tie where the rail commences to bend, and if the rail will not spring up enough of itself when the spikes are loosened and the joint shimmed to allow of a substantial shim (more than a shaving), it is better to adze off a trifle from the tie to make room for a substantial thin shim. Track-walkers, in looking for broken rails, should always look closely at the ties with the thin shims or the one adjoining it. Brush away the snow and examine the base of the rails, and a crack may be there which would soon lead to a break and perhaps disaster.

When shims of more than ordinary thickness are used, they should be spiked to the tie with extra spikes, and every precaution taken to prevent the rails from spreading. In shimming very rough track, it frequently happens that the alignment may be improved at the same time, and no pains should be spared in this respect.

In many places it is well to use salt in frogs and switches, and at such road crossings as cannot readily be reached and cleared by track-walkers. A few dollars' worth of salt properly used may prevent, and doubtless has prevented, many serious derailments from ice and snow; and it contributes largely to the safety of passengers and others to sprinkle car steps and steps at stations with salt. These suggestions have appeared before in these columns and have been acted upon with good results.

It is also gratifying to notice many changes in platforms at country stations, rendering them more convenient and safe, in accordance with suggestions made in the *Railroad Gazette* a year or so ago.

The great numbers of accidents from misplaced switches should draw the attention of managing officers to the importance of providing distance signals, safety switches, and more trusty switch-tenders. In yards where a great deal of switching is done, every one is a switch-tender, and a run-off now and then may be accepted as a matter of course; but the switches on main tracks should be under control of special switchmen, with authority to order yard-men

NAME OF ROAD.	MILEAGE.					EARNINGS.					EARNINGS PER MILE.	
	1879.	1878.	Inc.	Dec.	Perc.	1879.	1878.	Increase.	Decrease.	Perc.	1879.	1878.
Atchison & Nebraska.....	178	149	29		19.3	\$60,988	\$38,124	\$22,864		59.0	\$343	\$256
Atchison, Topeka & Santa Fe.....	1,152	869	283		32.5	586,500	324,185	262,315		80.9	509	373
Burlington, Cedar Rapids & North.	454	434	20		4.6	178,204	124,676	53,528		41.3	389	287
Central Pacific.....	140	140				28,511	18,860	9,651		51.1	195	129
Chesapeake & Ohio.....	2,335	2,097	238		13.0	1,311,000	1,432,918		\$121,918	8.5	561	683
Chicago & Alton.....	435	435				185,559	136,949	48,610		35.5	427	315
Chicago & Eastern Illinois.....	840	678	162		23.9	534,873	340,947	193,926		56.9	637	503
Chi., Clinton, Dub. & Minn.....	222	222				46,015	35,586	10,429		29.0	207	160
Chicago & Milwaukee & St. Paul.....	159	154	5			80,026	63,329	16,697		26.4	503	398
Chicago & Northwestern.....	2,182	1,729	453		26.6	1,061,000	716,571	344,429		48.1	480	415
Chicago, St. Paul & Minn.....	2,289	2,103	186		8.9	1,312,300	1,080,838	231,462		21.4	573	515
Cleveland, Mt. Vernon & Del.....	178	178				120,822	96,876	23,946		24.7	678	544
Det., Lansing & Northern.....	197	197				35,479	30,078	5,403		18.0	226	191
Hannibal & St. Joseph.....	197	197				91,527	67,477	24,050		35.5	465	342
Illinois Central, Illinois lines.....	292	292				197,115	178,567	18,548		10.4	675	612
Iowa lines.....	854	854				478,778	465,234	13,544		2.9	561	548
International & Great Northern.....	402	402				128,877	118,327	10,550		8.9	321	294
Kan. City, Ft. Scott & Gulf.....	526	516	10		1.9	213,901	222,872		8,971	4.0	407	432
Kan. City, Lawrence & So.....	179	180	16		10.0	91,157	55,807	35,350		63.0	518	349
Kan. City, St. Jo. & Com. Bkfs.....	241	185	56		30.8	43,693	27,446	16,247		90.0	183	148
Little Rock & Fort Smith.....	254	254				141,487	117,503	23,984		20.4	457	463
Louisville & Nashville.....	165	165				63,531	38,613	24,918		64.5	385	234
Memphis, Pad. & No.....	1,118	973	145		14.9	610,090	505,843	104,247		24.5	563	520
Minneapolis & St. Louis.....	115	115				21,293	18,166	3,127		17.4	185	158
Missouri, Kansas & Texas.....	123	123				52,383	29,867	22,516		75.3	426	243
Mobile & Ohio.....	786	786				380,028	242,598	137,430		56.7	483	309
Nashville, Chattanooga & St. Louis.....	506	527		21	4.0	317,470	290,586	26,884		9.3	627	574
Northern Pacific.....	349	340	9			185,653	149,552	36,101		24.1	532	428
Paducah & Elizabethtown.....	644	644				108,818	62,470	46,348		74.2	169	97
Pennsylvania.....	185	185				37,557	25,607	11,950		46.7	203	138
Philadelphia & Reading.....	1,765	1,716	49		2.9	3,453,925	2,605,296	848,629		32.6	1,957	1,618
Pitts., Cin. & St. Louis.....	926	800	126		15.8	1,442,587	881,656	560,931		63.6	1,558	1,102
St. L., At. & T. H., Main Line.....	201	201				349,989	289,571	60,418		20.9	1,741	1,441
St. L., At. & T. H., Bellefleur Le.....	195	195				108,482	72,062	36,420		48.7	556	374
St. Louis, Iron Mt. & Southern.....	71	71				62,750	48,606	14,144		29.1	884	684
St. Louis & San Francisco.....	685	685				664,675	468,195	196,480		41.9	970	689
St. Paul & Sioux City.....	477	328	149		45.4	212,806	102,636	110,170		107.3	446	313
Scioto Valley.....	392	329	63		19.2	102,864	96,500	6,364		6.6	262	293
Toledo, Peoria & Warsaw.....	100	100				30,379	20,132	10,247		51.0	304	201
Union Pacific.....	237	237				111,981	88,044	23,937		54.0	472	371
Wisconsin Valley.....	1,042	1,042				1,045,774	854,165	191,609		22.4	1,004	820
Total, 42 roads.....	107	90	17		18.9	20,488	10,478	10,010		95.3	191	116
Total increase.....	23,858	21,847	2,032	21	9.5	\$16,329,635	\$12,594,621	\$3,865,013	\$130,889	29.7	\$684	\$531

RAILROAD EARNINGS, TWELVE MONTHS ENDING DECEMBER 31.

NAME OF ROAD.	MILEAGE.					EARNINGS.					EARNINGS PER MILE.				
	1879.	1878.	Inc.	Dec.	P.c.	1879.	1878.	Increase.	Decrease.	P. c.	1879.	1878.	Inc.	Dec.	P. c.
Atchison & Neb	151	149	2		1.3	\$541,822	\$443,345	\$98,477		22.0	\$3,587	\$2,975	\$612		20.4
Atch., Top. & S. F.	958	809	149		18.6	6,338,447	3,934,115	2,404,332		61.1	6,616	4,893	1753		35.8
Bur. Ced. Rap. & No. Bur.	439	434	5		1.2	1,534,949	1,527,967	7,282		0.5	3,496	3,520		24	0.7
Bur. & Mo. R. in Neb.	442	378	66		17.6	2,166,926	1,909,519	257,407		13.2	4,889	5,079		190	3.8
Cairo & St. Louis	146	146				270,983	231,504	39,479		17.1	1,856	1,586	270		17.1
Central Pacific	2,250	2,067	183		9.0	17,127,149	17,607,451		\$480,302	2.7	7,612	8,518		906	10.7
Chesapeake & Ohio	435	435				1,942,935	1,907,415	35,520		1.9	4,467	4,385	82		1.9
Chicago & Alton	782	678	104			5,745,880	4,671,519	1,074,361		22.9	7,348	6,890	458		6.6
Chi. Clin. Dub. & Mo.	222	222				489,439	481,194	8,245		1.7	2,205	2,167	38		1.7
Chi. & Eastern Illinois	159	159				890,483	806,803	83,680		10.4	5,001	5,074	527		10.4
Chi. Mil. & St. Paul	1,951	1,509	442		29.5	10,009,000	8,451,762	1,557,238		18.4	5,130	5,001		471	8.2
Chi. & N. W.	2,176	2,086	90		4.4	16,084,778	14,969,740	1,085,038		7.5	7,392	7,191	201		2.8
Chi., St. Paul & Minn.	178	178				1,169,900	942,345	227,555		24.1	6,572	5,294	1278		24.1
Cleve., Mt. V. & Del.	157	157				399,413	378,497	20,916		5.5	2,544	2,411	133		5.5
Det., Lan. & No.	197	192	5		2.7	1,105,516	966,652	138,864		14.0	5,612	5,035	577		11.5
Flint & Pere Mar.	285	281	4			1,170,900	1,081,148	89,752		8.3	3,969	3,492	477		13.6
Grand Trunk	1,344	1,390		46	3.3	9,163,185	8,917,234	245,951		2.8	6,818	6,415	403		6.3
Great Western	526	526				4,579,850	4,491,672	88,178		1.9	8,707	8,539	168		1.9
Hannibal & St. Jo.	292	292				1,936,528	2,045,450		108,922	5.3	6,632	7,005		373	5.3
Ill. Cen., Ill. lines	854	821	33		4.0	5,513,269	5,560,576		47,307	0.9	6,456	6,773		317	4.7
Ill. Cen., Iowa lines	402	402				1,463,434	1,538,558		75,124	4.9	3,640	3,827		187	4.9
Inter. & Gr. Northern	520	516	4		0.8	1,771,494	1,626,338	145,156		8.9	3,407	3,152	255		8.0
Kan. City, Ft. S. & G.	163	160	3		1.9	802,338	831,015	60,657		7.0	5,474	5,198	276		5.3
Kan. City, Law. & So.	190	185	5		2.7	492,273	431,015	61,258		13.6	2,591	2,341	250		10.6
Kan. City, St. J. & C. B.	254	254				1,759,098	1,511,535	247,563		16.4	6,925	5,951	974		16.4
Kansas Pacific	673	673				4,873,729	3,789,260	1,084,469		28.6	7,242	5,630	1612		28.6
Louisville & Nash.	1,034	970	64		6.6	5,948,542	5,355,100	593,442		11.1	5,753	5,521	232		4.2
Mem., Paducah & No.	115	115				166,934	186,324		19,390	10.4	1,452	1,620		168	10.4
Minn. & St. Louis	123	123				471,345	405,235	66,100		16.3	3,832	3,294	538		16.3
Missouri, Kan. & Tex.	786	786				3,943,373	3,983,100	39,727		12.1	4,254	3,795	459		12.1
Mobile & Ohio	511	527		16	3.0	1,009,973	1,186,358			11.4	4,165	3,624	541		15.6
Nash., Charta. & St. L.	349	349				1,800,877	1,631,682	169,195		10.4	5,180	4,075	485		10.4
Northern Pacific	644	644				1,997,504	1,215,693	781,811		64.3	3,102	1,888	1214		64.3
Pad. & E'town	185	185				337,472	320,497	16,975		5.3	1,824	1,732	92		5.3
Pennsylvania	1,743	1,716	27		1.6	34,620,279	31,636,735	2,983,544		9.4	18,662	18,439	1436		7.7
Phila. & Reading	874	800	74		9.3	15,351,184	12,813,770	2,537,414		19.8	17,562	16,017	1545		9.7
Pitts., Cin. & St. L.	201	201				3,966,425	3,176,370	789,055		13.5	17,042	15,778	1264		13.5
St. L., A. & T. H. B. Line	71	71				559,042	506,228	52,814		10.6	7,882	7,130	752		10.6
St. L., Iron Mt. & So.	685	685				5,301,873	4,514,321	787,552		17.4	7,740	6,562	1148		17.4
St. Louis & San Fran.	395	328	67		20.4	1,853,843	1,208,467	645,376		36.9	4,100	3,709	481		13.6
St. Paul & Sioux City	354	329	25		7.6	1,133,802	1,100,889	32,913		3.	3,202	3,344		14	3.0
Scioto Valley	100	100				317,822	280,348	37,474		13.4	3,178	2,863	375		13.4
Toledo, Peoria & War.	237	237				1,242,218	1,243,959		1,741	0.1	5,241	5,249		8	0.1
Wisconsin Valley	91	90	1		1.1	225,175	196,099	28,876		14.0	2,474	2,185	289		13.2
Total 44 roads.	24,654	23,353	1,303		62	170,634,150	161,771,285	18,853,866	\$732,786	11.0	\$7,282	\$6,927	\$355		5.1
Total increase.			1,301		5.6			17,862,874							

Southwestern Railway Association.

The Reorganization Committee has been holding frequent meetings recently, and finally presented its report at a meeting of the Association, held in Chicago, Jan. 23. The report favored the continuation of the Association as it at present exists. It was proposed that a complete statement of the exact condition and state of affairs now existing in the Association be made, and forward the same to the presidents and general managers of the roads represented. All accounts are to be settled up to date, so as to present a correct report of the standing of the Association. These statements will be made to the presidents and general managers of each road personally, and if they desire they can then hold a meeting among themselves. If they choose to readjust the business, or modify the agreement, their action will take effect from yesterday. This report covers all questions that are now troubling the Association, and includes all business transacted by it.

The committee's work met with favor, and the report was adopted and the committee discharged.

Until the presidents and managers come to a conclusion, the business of the Association will be carried on as heretofore, and with the same percentages allowed to each individual road as formerly. There will be no change in rates at present.

The Association then voted not to accept the resignation of Mr. George L. Carman, its General Agent at Kansas City.

Commissioner Midgley then presented a statement of the business done by the roads in the Association since the date of its reorganization, Sept. 15, 1879. The amount of tonnage carried west-bound between that time and Jan. 1, 1880, was 102,063 tons, by all roads. The number of tons carried east-bound was 267,534. The Chicago Division carried 46.6 per cent; the Hannibal Division 10.4 per cent, and the St. Louis Division 43 per cent. Of the east-bound freight 98,143 tons were wheat, 78,140 tons were corn, and 21,852 cattle. This shows that the bulk of the freight matter carried was grain. There were 10,801 tons of hogs carried, while the fourth-class matter, such as meats and provisions, amounted to 52,326 tons. Included in Class C on the west-bound traffic, comprising railroad and ties, were 48,307 tons of matter. The lumber pool, which has existed for about six months, has earned the roads in the Association \$670,000. About 70 per cent. of the lumber carried came from Chicago.

The Association then adjourned to meet again Feb. 25, in St. Louis.

ELECTIONS AND APPOINTMENTS.

Baltimore, Chesapeake & Delaware Bay.—At a recent meeting Dr. G. W. Goldsborough was chosen President, with the following directors: J. P. Manlove, Greensboro, Md.; N. S. Gere, Syracuse, N. Y.; Barton H. Jenks, Philadelphia; Dr. R. W. Earickson, Sidney C. Long, Baltimore.

Canada Southern.—Mr. E. P. Murray is appointed Superintendent of the United States Division, with office in Toledo, O., in place of Mr. M. D. Woodford, who has gone to the Ft. Wayne & Jackson road. Mr. W. E. Carroll (late Chief Train Dispatcher) succeeds Mr. Murray as Superintendent of the Canada Division, with office in St. Thomas, Ontario.

Carrillon & Greenville.—At the annual meeting in Montreal, last week, the following directors were chosen: J. J. Gibb, H. W. Shepherd, R. W. Shepherd, R. W. Shepherd, Jr., G. W. Simpson. The board elected G. W. Simpson, President; H. W. Shepherd, Vice-President.

Chattfield.—The following officers have been chosen for this Chicago & Northwestern proprietary road: President, Albert Keep; Vice-President, Marvin Hughtis; Secretary, J. B. Redfield; Treasurer, M. M. Kirkman.

Connecticut Railroad Commission.—The Governor of Connecticut has re-appointed and the Senate confirmed Mr. George M. Woodruff Railroad Commissioner, for three years from the expiration of his present term, July 1, 1880; also Wm. H. Hayward to fill the unexpired term of Francis A. Walker, resigned.

Connecticut River.—At the annual meeting in Springfield, Jan. 21, the following directors were chosen: A. B. Harris, N. A. Leonard, Springfield, Mass.; Oscar Edwards, Northampton, Mass.; Wm. B. Washburne, Greenfield, Mass.; Charles S. Sargent, Brookline, Mass.; Edward A. Dana, I. M. Spellman, Boston; S. M. Waite, Brattleboro, Vt.; Wm. R. Cone, Hartford, Conn. The new directors are Messrs. Cone, Harris and Leonard, who succeed Daniel L. Harris, deceased, and Roland Mather and Chester W. Chapin, who declined reelection.

Delaware River & Lancaster.—At the annual meeting in Lancaster, Pa., Jan. 12, the following were chosen: President, Robert Crane, Philadelphia; Directors, D. B. Case, C. S. Kaufman, Dr. J. K. Lineaweaver, Columbia, Pa.; Robert M. Bolenius, Dr. Henry Carpenter, John D. Skiles, Lancaster, Pa.; John H. Rowland, New Holland, Pa.; Alexander Sellers, Telford, Pa.; Isaac A. Guldin, Pughtown, Pa.; Samuel K. Cassel, Blooming Glen, Pa.; E. D. White, Churchtown, Pa.; N. A. Anders, Philadelphia.

Detroit & Pelican Valley.—The officers of this new company are: President, G. W. P. Bowman; Vice-President, J. H. Sutherland; Secretary, F. C. Choate; Treasurer, A. H. Wilcox. Office in Detroit, Becker County, Minnesota.

Ft. Wayne & Jackson.—Mr. M. D. Woodford has been appointed General Superintendent of this road (formerly the Ft. Wayne, Jackson & Saginaw), and issues the following circular under date of Jan. 23:

"By order of the board of directors, I have this day assumed control of the road and property of this company, and all communications concerning the affairs thereof will be addressed to me, at Jackson, Mich. The several heads of departments and all subordinate employees are requested to continue in the performance of their respective duties; and I trust that I may receive their hearty cooperation in the furtherance of the company's interests."

Fitchburg.—At the annual meeting in Boston, Jan. 27, the old board was unanimously re-elected, as follows: Rodney Wallace, Fitchburg, Mass.; Charles U. Coting, Brookline, Mass.; Seth Bemis, Newton, Mass.; Robert Codman, Wm. B. Stearns, Boston.

Illinois & St. Louis.—At the annual meeting in East St. Louis, Ill., Jan. 15, the following directors were chosen: Joseph W. Branch, H. Campbell, Jr., C. S. Greeley, Russell Hinkley, A. C. Huckle, George Knapp, G. A. Kerner, Adolphus Meier, John D. Perry, Jefferson Rainey, J. B. Rentschler, W. E. Richardson, Ralph Sellers, B. F. Switzer, Thomas Winstanley. The board elected Joseph W. Branch, President; Adolphus Meier, Vice-President; P. T. Burke, Secretary and Treasurer; C. H. Shorman, Superintendent.

Junction City & Ft. Kearney.—At the annual meeting in Junction City, Kan., Jan. 21, the following directors were chosen: D. M. Edgerton, C. S. Greeley, L. F. Smith, S. H. H. Clarke, Russell Sage, Jay Gould, Sidney Dillon, J. H. Howland, J. R. McClure, A. C. Pierce, John K. Wright, F. L. Ames. The road is worked by the Kansas Pacific.

Louisville, New Albany & Chicago.—The new board has elected R. S. Veech, President; H. F. Vall, Vice-President; W. H. Lewis, Secretary and Treasurer.

Missouri, Kansas & Texas.—At a meeting held in New York, Jan. 27, Messrs. John T. Agnew, G. C. Clark, Moses Williams, J. M. Forbes, D. O. Clark, G. C. Crocker, L. M. Lyman and I. M. Sergeant presented their resignation as directors. The board elected in their places Jay Gould, Russell Sage, Sidney Dillon, George J. Forrest, Wm. Bond, F. L. Ames and Frank S. Bond. The old directors remaining are N. L. McCready, E. D. Barbour, H. C. Cross, C. H. Pratt and B. P. McDonald.

The reorganized board elected Jay Gould President; Frank S. Bond, First Vice-President; N. L. McCready, Second Vice-President; H. B. Henson, Secretary and Treasurer. Mr. Bond is Vice-President of the Texas & Pacific.

Montreal & Champlain Junction.—The officers of this new company are: President, Hon. James Ferrier; Vice-President, Joseph Hickson; Secretary, Charles Drinkwater; Chief Engineer, E. P. Hannaford. Office in Montreal.

Montreal, Portland & Boston.—At the annual meeting in Montreal, Jan. 19, the following directors were chosen: Amos Barnes, W. K. Blodgett, R. N. Hall, Emmons Raymond, T. W. Ritchie, Lucius Robinson, S. T. Willett. The board elected S. T. Willett, President; R. N. Hall, Vice-President; M. S. Loneragan, Secretary and Treasurer.

New York, Connecticut & Eastern.—The directors of this new company in New York are: Benjamin Sands, George L. Clark, Francis W. Ford, A. M. Kidder, Sheldon Collins, T. N. Brown, H. W. Webb, James S. Leeds, C. V. Sidell, Charles D. Ingersoll, H. C. Hepburn, H. R. M. McElligott, David Lydig. The officers are: George L. Clark, President; A. M. Kidder, Vice-President; T. Nicoll Brown, Secretary; C. V. Sidell, Treasurer.

New York, Ontario & Western.—This company has been organized by the purchasers of the New York & Oswego Midland, who have chosen the following directors: H. Amy, W. S. Bartlett, N. A. Cowdry, W. H. Fenner, Jr., Theodore Houston, F. P. James, Conrad N. Jordan, Edward Livingston, L. H. Meyer, Edwin Parsons, W. C. Whitney, O. S. Williams, Coe F. Young. The board elected Conrad N. Jordan, President; Theodore Houston, Secretary.

Norwich & Worcester.—At the annual meeting in Worcester, Mass., Jan. 21, the following directors were chosen: John F. Slater, Norwich, Conn.; E. L. Davis, Francis H. Dewey, G. W. Gill, Charles W. Smith, Worcester, Mass.; Wm. F. Weld, Boston; Wm. Bayard Cutting, New York. The board elected F. H. Dewey, President; Edward T. Clapp, Secretary; George L. Perkins, Treasurer; P. St. M. Andrews, Managing Agent under the lease. The road is worked by the New York & New England.

Northwestern Grand Trunk.—Mr. Wm. Bonner is appointed Traffic Auditor and will have charge of all freight and passenger accounts. Mr. H. W. Chester succeeds Mr. Bonner as General Accountant.

Ohio Falls Transfer.—This company has been fully organized by the election of the following directors: A. J. Hay, Charlestown, Ind.; F. C. Johnson, J. H. Stensburg, New Albany, Ind.; W. F. Beach, W. H. Horst, Jeffersonville, Ind.; W. C. Hite, I. C. Murray, Louisville, Ky. The board elected W. C. Hite, President; A. J. Hay, Secretary and Treasurer; W. F. Beach, Chief Engineer.

Ohio Railroad Commissioner.—The Governor of Ohio has appointed and the Senate confirmed Gen. J. S. Robinson as Commissioner of Railroads and Telegraphs, in place of Wm. Bell, Jr.

Peach Bottom.—At the annual meeting in Delta, Pa., Jan. 12, the following were chosen: President, Charles R. McConkey; John A. Alexander, J. P. Ambler, Isaac Bradley, Samuel Dickey, John Humphrey, Robert B. Patterson, Wm. G. Rose, Michael Schall, W. Latimer Small, Charles H. Stubbs, Wm. Wallace.

Pittsburgh, Virginia & Charleston.—At a meeting held in Philadelphia, Jan. 22, the board elected D. P. Corwin, Secretary and Treasurer, with office in Pittsburgh. Mr. Corwin has been Treasurer since the organization of the company.

Portland & Ogdensburg.—At the annual meeting in Portland, Me., Jan. 20, the following directors were chosen: S. J. Anderson, J. P. Baxter, J. Eastman, Francis Fessenden, H. N. Jones, W. F. Milliken, R. M. Richardson, J. S. Ricker, W. W. Thomas, Jr., Samuel Waterhouse.

Providence, Warren & Bristol.—At the annual meeting in Providence, R. I., Jan. 26, the following directors were chosen: Ambrose E. Burnside, Samuel W. Church, T. P. I. Goddard, Wm. Goddard, Wm. R. Robeson, Francis M. Weld, Henry A. Whitney. The board re-elected Henry A. Whitney, President.

St. Paul & Duluth.—Mr. F. W. Davis is Acting Auditor until further notice, in place of Mr. C. F. Cruft, deceased.

Sharpsville.—At the annual meeting in Sharpsville, Pa., Jan. 12, the following were chosen: President, Walter Pierce; Directors, H. C. Blossom, Joseph Walker, B. H. Henderson, John Phillips, Frank Pierce, J. J. Pierce; Secretary and Treasurer, David Agnew.

Sunbury, Hazleton & Wilkesbarre.—At the annual meeting in Philadelphia recently, the following were chosen: President, Isaac Eyre; Directors, Wm. Kinsley, John W. Lock, Cyrus Hillborn, George W. Zeigler, J. L. Casselberry, S. S. Wolverson, C. C. Rhodes. The road is leased to the Pennsylvania.

Tidewater Pipe Line.—At the annual meeting in Titusville, Pa., the following directors were chosen: B. D. Benson, R. E. Hopkins, Titusville, Pa.; H. L. Taylor, Fredonia, N. Y.; Franklin B. Gowen, Philadelphia; James R. Keene, New York.

Union Pacific.—The new consolidated company has elected the following directors: E. H. Baker, Elisha Atkins, F. Gordon Dexter, Boston; Frederick L. Ames, Easton, Mass.; Sidney Dillon, David Dows, Jay Gould, Solon Humphreys, Russell Sage, Thomas T. Eckert, New York; Wm. L. Scott, Erie, Pa.; Carlos S. Greeley, St. Louis; G. M. Dodge, Council Bluffs, Ia.; S. H. H. Clarke, Omaha, Neb.; John Sharp, Salt Lake, Utah. The board elected Sidney Dillon, President; Elisha Atkins, Vice-President; Henry McFarland, Secretary and Treasurer. These officers are directors of the Union Pacific. Of the directors, Messrs. Baker, Atkins, Dexter, Ames, Dillon, Dows, Gould, Humphreys, Sage, Scott, Clarke, and Sharp were in the old Union Pacific board; Messrs. Greeley, Dodge, Ames, Dillon, Sage, and Gould were directors of the Kansas Pacific, and Messrs. Greeley, Dillon, and Gould were also in the Denver Pacific board. The directors of the old boards dropped are Messrs. J. P. Usher, D. M. Edgerton, and James M. Ham from the Kansas Pacific; W. A. H. Loveland from the Union Pacific, and Messrs. Addison Cammack and James R. Keene, who were directors of both companies.

PERSONAL.

The Brotherhood of Locomotive Engineers has made a settlement with Frank Abbott, of Port Jervis, N. Y., who was Treasurer of its insurance association for some years previous to 1877, and was charged with having collected nearly \$14,000 of members' dues which he appropriated to his own use. Abbott was once President of the town of Port Jervis, was twice elected to the New York Assembly, and in 1873 was nominated for State Senator. He said that he used about \$6,000 of the Brotherhood's money to pay election expenses after this nomination; but he was defeated. He deeded to the Brotherhood his homestead in Port Jervis, said to be worth \$8,000, which is all that it could get. He was once indicted for embezzlement, but was never brought to trial.

—Mr. M. D. Woodford resigns his position as Superintendent of the United States Division of the Canada Southern, to take charge of the Ft. Wayne & Jackson road. On leaving the Canada Southern the employees of his division presented Mr. Woodford with a very handsome gold chain.

—Four parties are being urged upon the Quebec government for the position of General Manager of the Quebec, Montreal, Ottawa & Occidental. They are C. A. Scott, Manager of the Western Division since its opening, and well spoken of as a capable officer; J. T. Prince; Walter Shanley, well-known in connection with the Hoosac Tunnel contract, and L. A. Senecal, a prominent Quebec politician and contractor for the Levis & Kennebec road.

—Mr. George L. Carman, now General Agent at Kansas City for the Southwestern Railway Association, was recently offered the position of General Freight Agent of the Kansas City, St. Joseph & Council Bluffs road. The Southwestern Association, however, valued his services so highly that it refused to release him from his engagement.

—Henry P. Dechert, for a long time Secretary of the New Jersey bondholders' committee was recently removed from that position for failing to account satisfactorily for bonds committed to his care. This week he has been arrested at the suit of a bondholder who claims that he delivered to him some bonds to be deposited with the committee, and that Dechert converted them to his own use. He claims, however, that he has a sufficient defense.

—Mr. Horace Thompson, a well-known banker of St. Paul, Minn., died at the Fifth Avenue Hotel, New York, Jan. 28th, of pneumonia, after a very short illness. He was 52 years old and had lived in St. Paul about 20 years. He was one of the first incorporators of the St. Paul & Sioux City Company, and had been its Treasurer for a number of years. He was also interested in other Minnesota roads.

TRAFFIC AND EARNINGS.

Railroad Earnings.

Earnings for various periods are reported as follows:

Year ending Dec. 31:	1879.	1878.	Inc. or Dec.	P. c.
Nash., Chatta. & St.				
Louis	\$1,800,877	\$1,631,681	I.	\$169,196 10.4
Net earnings	673,965	576,975	I.	96,990 16.8
Pennsylvania	34,629,279	31,626,735	I.	3,002,544 9.4
Net earnings	14,237,559	13,167,741	I.	1,069,798 8.1
Pitta., Cin. & St. L.	3,606,425	3,176,370	I.	430,055 13.5
Net earnings	1,565,597	1,186,763	I.	378,834 31.9
Month of December:				
Pennsylvania	\$3,453,925	\$2,605,296	I.	\$848,629 32.6
Net earnings	1,512,054	931,934	I.	580,120 62.1
Second week in January:				
Atchison, Top. & S. F.	\$115,500	\$77,721	I.	\$37,779 48.6
Chicago & Alton ..	126,509	94,189	I.	32,380 34.4
Louisville & Nash.	137,500	88,000	I.	49,500 56.2
Wabash, St. L. & Pacific	220,347	135,039	I.	85,308 63.2
Third Week in January:				
Chl., Mil. & St. Paul	\$169,000	\$137,617	I.	\$31,383 22.8
St. Paul & Sioux City	25,092	20,128	I.	4,964 24.7
Week ending Jan. 9:				
Great Western	\$99,875	\$59,248	I.	\$40,627 68.6
Week ending Jan. 17:				
Grand Trunk	\$177,862	\$172,320	I.	\$5,566 3.2

Grain Movement.

For the week ending Jan. 17 receipts and shipments of grain of all kinds at the eight reporting Northwestern markets and receipts at the seven Atlantic ports have been, in bushels, for the past seven years:

Year.	Northwestern receipts.	Northwestern shipments.	Atlantic receipts.
1874	2,919,179	1,215,756	1,785,547
1875	1,945,841	515,831	1,470,931
1876	2,328,490	1,052,381	2,034,592
1877	1,632,416	638,319	1,217,472
1878	4,158,086	1,797,607	3,275,956
1879	3,123,153	1,417,208	2,394,162
1880	2,739,454	1,157,345	2,575,922

The receipts at Northwestern markets for the week this year, since April last, are smaller than in the corresponding week of the two previous years; yet would be called very large in any winter before 1878. The shipments of these markets are smaller than in the previous week, but about as large as the average since navigation closed.

The receipts at Atlantic ports are the smallest since the corresponding week of last year, yet large for a winter week. Last year receipts were reduced by the snow blockade; there was then but one week after January the receipts were less than 4,000,000 bushels.

Of the receipts at Northwestern markets for the week this year, Chicago had 39.5 per cent.; St. Louis, 22.6; Milwaukee, 14.9; Peoria, 9; Toledo, 8.5; Detroit, 2.8, and Cleveland, 2.7 per cent.

Of the receipts at Atlantic ports, New York had 38.7 per cent., Baltimore, 22.4, Philadelphia, 14.5, Boston, 10.4, New Orleans, 8.4, Portland, 5.5, and Montreal 0.2 per cent. New York's receipts are not half as great as in the preceding week; Baltimore's are a little greater. Portland's receipts for two weeks have been extraordinarily large.

For the eight weeks ending Jan. 21, the export clearances of flour and grain of all kinds from the seven Atlantic ports were 739,366 barrels of flour and 22,400,030 bushels of grain this year, against 470,083 barrels of flour and 21,401,666 bushels of grain in the corresponding period of last year. Contrary to the prevailing opinion, therefore, the exports have been larger this Winter than last; however, the wheat exports have been materially less, and the exports for the

last four of the eight weeks this year have been but 9,579,837 bushels, against 12,820,193 in the first four.

Coal Movement.

Coal tonnages for the week ending Jan. 17 are reported as follows:

	1880.	1879.	Increase.	P. c.
Anthracite.....	409,549	298,584	110,965	37.2
Semi-bituminous.....	81,564	41,970	39,594	94.3
Bituminous, Pennsylvania.....	36,561	34,250	2,311	6.7
Coke, Pennsylvania.....	29,604			

The Sharpville Railroad, in Mercer County, Pa., in the year 1879, carried 218,984 tons of coal from the mines along its line.

San Francisco coal receipts in 1879 were 477,997 tons Pacific coast coals; 23,759 tons Eastern, Anthracite and Cumberland; 80,175 tons Australian; 36,588 tons English coal; total, 618,519 tons, a decrease of 8,214 tons, or 1.3 per cent., from the previous year.

Petroleum.

Stowell's Petroleum Reporter gives the following figures for the Pennsylvania oil regions in December, in barrels of 42 gallons:

	1879.	1878.	Increase.	P. c.
Production.....	1,769,356	1,318,078	450,678	34.2
Shipments.....	1,532,585	992,722	539,863	54.2
Stock on hand.....	8,470,490	4,615,299	3,855,191	83.5
Number of producing wells.....	11,990	10,337	1,653	15.7

Pittsburgh re-shipments of refined oil for the month were 48,885 barrels east by Pennsylvania Railroad and 16,450 barrels westward.

Provision Movement.

Exports from Nov. 1, to Jan. 17, have been, in tons of 2,000 lbs:

	1879-80.	1878-79.	Decrease.	P. c.
Provisions.....	133,310	149,391	13,081	9.0

The number of hogs packed in the Northwest from Nov. 14 to Jan. 14, is reported to have been 4,556,104 this year, against 5,514,573 last year, and 4,102,318 in 1877-78. The decrease, in comparison with last year, is 21 per cent. More than half of the decrease has been at Chicago, where packing has been interrupted by strikes. Still 34.1 per cent. of the whole number was packed at Chicago this year, against 37.1 last year, and 35.4 in 1877-78. All the other leading points except Louisville show a decrease compared with last year.

RAILROAD LAW.

Wisconsin Railroad Legislation.

A correspondent of the La Crosse Republican writes from Madison as follows:

"An amendment to the general railway law will be proposed providing for the publication in the annual report of the Railway Commissioner, sworn statements of the capital stock, gross earnings, net earnings, operating expenses, etc., of express and telegraph companies doing business in this state, and providing a more equitable mode for taxation in the cases of these corporations.

"The measure that is likely to cause the most exciting fight will be one to increase the license fees of railroads. A bill of this character will be introduced. It will provide that railroads of the first class, which now pay 4 per cent on their gross earnings, shall hereafter be required to pay 6 per cent. The fee on the roads of other classes will be correspondingly increased. But another proposition on the subject of railroad taxation, and the one likely to have the strongest following, will provide that railroad property shall be taxed like other property, upon its assessed valuation. The supporters of this measure claim that the present law, which taxes railroads upon their gross earnings is exceptional and a departure from the constitutional rule of uniformity. The discussion which the consideration of this measure will occasion will be both interesting and animated."

New Jersey Railroad Legislation.

The only railroad law before the New Jersey Legislature so far is a bill similar in its provisions to the New York statute, which provides that when a railroad is sold under foreclosure, holders of stock or other securities subordinate to the foreclosed mortgages, shall for six months after the sale have the right to join in the purchase and become stockholders in the reorganized company, upon payment of their proportional share in the expenses of the foreclosure and sale.

The Pittsburgh Riot Cases.

In Hall against the Pennsylvania Railroad Company the United States Circuit Court in Philadelphia delivered an opinion Jan. 23. This is a test suit, tried in 1878, to fix the responsibility for loss by the Pittsburgh riot. A jury was dispensed with and the evidence was submitted to the judge to ascertain the facts and apply the law. After reviewing the testimony, Judge McKenna concluded his opinion as follows: "Upon the whole case I am of the opinion and so find that the loss complained of was caused by fire while the plaintiff's goods were in transit by the defendant within the meaning of the exception in the bill of lading; that the defendant is not shown to have been guilty of any negligence by which the efficiency of the exception is in any wise impaired, and henceforth the plaintiff is not entitled to recover." It was admitted at the trial that the plaintiff's goods were destroyed by fire during the riot, and the bill of lading offered in evidence contained a clause excepting the liability of the railroad company for freight lost by fire.

THE SCRAP HEAP.

Railroad Equipment Notes.

The Laconia Car Co., at Laconia, N. H., has orders on hand for 250 freight cars.

The Keith Manufacturing Co., at West Sandwich, Mass., is busy, with orders for 300 freight cars to fill.

The car works of Osgood Bradley, at Worcester, Mass., are building 12 passenger and 500 freight cars for various roads.

The Portland Company, at Portland, Me., is building 250 freight cars, most of them for the Eastern Railroad.

The Beaver Falls (Pa.) Car Works have been adding considerably to the machinery in the shops.

The Pennsylvania Railroad shops at Altoona have begun work on 20 new passenger cars.

The Pittsburgh Locomotive Works are building 12 engines for the Atlantic & Great Western. They have also an order for 12 engines for the Pacific Railway Improvement Co., contractor for the Texas & Pacific Extension to El Paso.

The new LaFayette (Ind.) Car Works have taken a contract to build 250 freight cars.

The Tioga Railroad shops at Blossburg, Pa., are changing the equipment of the road from 6 ft. to standard gauge.

The Lebanon (Pa.) Manufacturing Co. is very busy on freight cars.

The Flint & Pere Marquette shops, at East Saginaw, Mich., have recently completed a number of coal cars, and are building 100 cars especially for carrying logs.

Iron and Manufacturing Notes.

A company known as the Arcadia Iron Works Co. has bought the Arcadia estate on the James River & Kanawha Canal, near Buchanan, Va. The estate contains valuable deposits of iron ore, and the company intends to build a furnace there.

A charcoal blast-furnace is to be built at Clipper Gap, near Auburn, Nev., on the Central Pacific, where there are deposits of magnetite iron ore, with plenty of timber in the neighborhood.

Rock Run Furnace, in Cherokee County, Ala., with 4,000 acres of ore and timber lands, has been sold to J. H. Bass, of Ft. Wayne, Ind., the well-known car-wheel maker.

The Blake Crusher Co. has recently sold six of its stone-crushers to the Cincinnati Southern and one to the Central of New Jersey. They are used in breaking stone for ballast.

A large tract of iron and coal land in Mason County, W. Va., has been sold to English parties, who intend to build a blast furnace.

It is said that the Pennsylvania Steel Works, at Baldwin, Pa., will soon build an additional rolling mill for steel rails.

The Iron & Steel Co.'s furnace and rolling mill at Ironton, O., were last week sold at trustees' sale and bought for \$100,000 by George F. and S. J. Stone, of New York, and J. H. Bramwell, of Virginia.

The Stow Flexible Shaft Co., of Philadelphia, have just supplied a number of their flexible shafts to the Grand Trunk repair shops, where they will be used to run drills for drilling and tapping stay-bolt holes and similar work on locomotives.

The Chestnut Hill iron Co. has bought the rolling mill at Columbia, Pa., and is preparing to start it up.

The Weimer Machine Works, in Lebanon, Pa., have orders for machinery for 14 blast furnaces.

North Lebanon, Lebanon Valley, Donaghmore and Colebrookdale furnaces in Lebanon, Pa., are in blast, and two new furnaces are being built.

Poker.

A person has appeared on the New York Central road, who is described as a young lady, dressed in mourning, rather retiring and modest in manner, and with "large, fascinating, appealing dark eyes." She travels in a palace car, makes acquaintance with gentlemen, and plays a little game of poker, which generally ends in transferring the victims' available cash to her pockets. She is said to hold wonderful hands.

Smoking cars on railway trains which run to and from New York for the benefit of suburban residents contain two classes of men—those who desire to smoke and read, and those who play whist and smoke if they choose. The reading smokers wish for fair and reasonable quietness, but in many cases they are subject to the silly shrieks, and the still more silly, as well as filthy jokes of boys of sixteen to twenty, who play sickly games of whist, and make it intolerable for a decent man to ride with them.—*New York Herald.*

All of which is true, as many disgusted travelers can testify.

Gnashville, Tenn., and Skinnedcinnati is the proper way to put it since the Louisville road has shown its hand.

It is a Louisville paper which says this.

A superintendent of a New England road is credited with issuing an anti-deadhead order so strict that conductors were obliged to collect fare from themselves and from the brakemen on their trains. The order was modified so as to permit train-men to ride free on their own trains, and to permit the conductor of the gravel train to pass his laborers.

Iceicles the size of a man's body fringe the mouths of the mountain tunnels along the Central Pacific, and constantly endanger the brakemen on top of the freight cars.—*Reno (Nev.) Gazette.*

A Fortunate Escape.

The great value of the automatic block signal system in use on the Boston & Albany Railroad was tested a few days ago in the most satisfactory manner. On the morning of Dec. 8 there was an unusual amount of switching required to be done at Natick station. Before the last freight train had begun to leave the main track the 8:30 New York express was nearly due, and while every effort was being made by the engineer and conductor to get on the side track, the express came around the curve at its usual speed. The engineer saw the automatic block signal at danger, the air brakes were instantly applied, but before he could bring his train to a stop, so great was its momentum, that it shot past the signal about twice its length and within a very short distance of the freight train, a portion of which was still occupying the main track. Had it not been for the automatic block signal, which gave timely notice of danger, a collision would have been unavoidable, the results of which might have been as deplorable as the late collision at Jackson, on the Michigan Central Railroad.—*Boston Advertiser, Jan. 14.*

A Railroad across the St. Lawrence on the Ice.

The much talked of railway across the ice at Hochelaga is rapidly approaching completion. The rails are laid from the North Shore Railroad station to the edge of the ice, and thence the wood-work is completed some distance from the shore. The method of construction was simply to level a bed roughly across the ice. Cross-beams of spruce timber were then placed upon the leveled surface of the ice at regular intervals. Above these, longitudinal beams of square hemlock 35 to 40 ft. in length are laid, and then above all are placed transverse ties of three inch white spruce, upon which are put the rails. These ties have still to be placed in position in parts of the road, and no rails have yet been laid down, but these are minor details, and it is expected that the track will be ready for trains by next Wednesday. The width of way leveled upon the ice is 18 ft. The road keeps close to the shore for some distance on each side of the river and then curves out and goes across almost in a direct line. There is open water at some distance above, and rather near below, and any photographer who has sufficient enterprise has an opportunity to make a curious and interesting picture of the work and its surroundings. The contractors, however, have carefully tested the ice throughout the line, and have at no point found less than eighteen inches of solid support, while in the middle of the river when shoves have taken effect the thickness of the ice averages from 4 to 8 ft. It is expected that the road will be open this winter for at least two months. At first only freight trains will be run across until public confidence admits of the Southeastern Railway using it also for passenger traffic. Apart from the ice-bed, the track itself will be an excellent one, as it is perfectly solid.

Yesterday, a small donkey-engine was in use for the purpose of pumping water upon the ice, in order to freeze the substructure down. In some places nearly a foot of water has frozen about the stringers.—*Montreal Star, Jan. 24.*

A Prediction Verified.

Speaking of Edison's electric light and the readiness of the people to cry "humbog" at every new discovery, reminds Conductor Harvey Lamb, of trains

3 and 12 of the Delaware Division, of this incident at the introduction of the telegraph into use on railroads: Minot was Superintendent of the Erie road, and had ordered a wire stretched from Jersey City to Port Jervis. Ere it was completed, a meeting of the directors was held, when Mr. Minot's action was being discussed. The drift of the debate was that Mr. Minot had done a very foolish thing in trying to run trains by telegraph. Among those denouncing the plan was Homer Ramsdell, of Newburg, who thought it very unwise to further burden an already heavily-indebted company with the expense of a mere "scientific toy."

While the debate was in progress old man Minot was walking to and fro across the room, his hands nervously clutched behind him and his body bent forward. Presently he turned to the directors and remarked somewhat severely: "Gentlemen, the time will come when you cannot run trains over the Erie road except by using the telegraph."

Minot is dead; but he lived to see his words come true. And so did the directors.—*Port Jervis Gazette.*

Cattle on Track.

"That was," said Carpenter, "probably the closest shave that I ever had from going down the bank when I struck that drove of cows just this side of the second bridge west of Salisbury, on the Newburg Branch. There were a dozen or fifteen of them and all were on the track. I had a train of 20 loaded coal dumps and was blazing away the best 49 knew how to get over Pine Hill without stalling. I had a good start over the straight line just west, and when we poked our nose around the curve between that and the bridge I was going with the heavy train all of 25 miles an hour. As we turned to the left the fireman saw the cattle first, and in a sudden burst of the worst fright I ever saw he shrieked, 'My God, Abe! see what's on the track. Shut off, quick!' I took the situation in at a glance, and seen that I was too far on top of 'em to stop, so I pulled her out and hit 'em as hard as I could. Of course 'twas the best thing I could do to knock 'em off and not let 'em get under us, so we went through 'em like a pistol ball would go through paper. Horns flew one way, hoofs another, tails were like meteors flying through the air, and when we pulled up to see who would get the finest set of horns with which to adorn the engine and memorize the occasion, as well as the nicest chuck steak, there were fourteen down the bank, seven on each side. Some had their heads partly off, some their legs broken, and the rest badly mangled, so all but two had to be killed. My engine was a little besmeared, but no damage done. It was a fortunate crack I gave, for if any of 'em had got under, down the bank we'd a went sure, and a thundering big wreck been made."

"That reminds me," said Westervelt, "of the time I plowed through that big flock of sheep t'other side of the Otterkill crossing. I was going down the grade east of Goshen with a full-loaded train, and at a good clip, making, I should think, 30 miles an hour. There were at least 40 or 50 of the fleecy animals, and I didn't think they were dangerous to hit, and I couldn't stop if I did, so I just let her whiz, and looked out to see which way they went. 'Twas the most novel sight I ever see. One of 'em I noticed went clean through a rail fence, and took the fence with it. Another one I see strike a big rock, and I tell you he flattened out like some of the copper pennies the boys put on the track for us to run over. But the most of 'em took wings and upward they went, some 20, and more 40 feet high. You'd think 'twas raining sheep to see 'em come down. They were strewn all around in the road and fields adjoining the track, and when the owner found 'em he must have thought a dynamite mine blew 'em up."—*Honesdale (Pa.) Herald.*

Blowing up a Sleeping Car.

The Wagner palace car "Dexter," one of those forming the special train which conveyed a number of Canadian capitalists from Chicago to Manitoba a short time since, was returned to Milwaukee Thursday, in a badly wrecked condition.

It seems that some time during the return trip, the steam heater at one end of the car became dry and the porter in charge attempted to refill the boiler with cold water, when it exploded, tearing the entire end of the car out, and blowing the porter, James Gray, through the roof and a considerable distance into the air. His injuries are considered quite dangerous, and are exceedingly painful, although he will probably recover. The great wonder is that he escaped with his life, as the explosion was terrific, being heard a great distance, and completely shattered the car, and extensive repairs will be necessary thereon.—*La Crosse (Wis.) Republican, Jan. 24.*

OLD AND NEW ROADS.

Arguments on the Reagan Bill.—Arguments have been continued at intervals through the week before the House Committee on Commerce. On Jan. 27 Mr. Charles Francis Adams, Jr., presented an argument in support of inter-state railroad legislation. While not opposing the Reagan bill, the principal features of which he expressed readiness to adopt as just and well-intentioned, he suggests important modifications in it; some looking to the creation of a national commission to insure greater efficiency to the legislation which might be passed. Franklin B. Gowen, President of the Philadelphia & Reading Railroad Company, followed Adams in opposition to the bill. Mr. Gowen entered into a long explanation of the combinations between the Standard Oil Company and certain railroads, which he argued were unjust toward the pipe lines and to the railroads which he represented. In conclusion, Mr. Gowen suggested that a proper remedy against the evils complained of was for states by statutes to give the courts power to compel railway companies to move freight for one shipper on equal terms with another. This closed the hearing of argument by the committee in opposition to the bill.

Atchison & Nebraska.—It is reported that this road is to be leased to the Burlington & Missouri River in Nebraska, and that the details of the agreement are nearly completed. The road until recently extended from Atchison, Kan., to Lincoln, Neb., 147 miles, but lately it has been building an extension from Lincoln to Columbus, which interferes somewhat with some of the Burlington & Missouri River lines.

Atlantic & Great Western.—In the Court of Common Pleas, at Akron, O., Jan. 22, argument was heard on the question of confirming the foreclosure sale of this road. The confirmation is opposed by John S. Schultze, who claims to be the only bondholder resident in the United States, and by the United States Rolling Stock Company. The Court reserved its decision.

Baltimore, Chesapeake & Delaware Bay.—This project has been revived, and it is said that advantageous proposals for building the road have been received. The line is from Kent Island, Md., on Chesapeake Bay, eastward 40 miles to Harrington, Del., where connection will be made with the Junction & Breakwater road to Lewes. From Lewes the Old Dominion Company's steamships run to New York, and it is proposed also to establish a steam ferry to

Cape May. From the other end of the road a steam ferry will be run between Kent Island and Baltimore.

Bedford, Springfield, Owensboro & Bloomfield.—It is reported that the Indianapolis Rolling Mill Company, which owns this road, has sold it to parties interested in the Louisville, New Albany & Chicago road, with which it connects at Bedford, Ind. The road, which is of 3 ft. gauge, runs from Bedford to Switz City on the Indianapolis & Vincennes, 41 miles.

Burlington & Missouri River in Nebraska.—This company's Republican Valley line is now completed to Republican, Neb., 12.1 miles west of the late terminus at Bloomington, and 81.5 miles from the junction with the main line at Hastings. The extension was opened for business Jan. 26. The new stations are Perth, 74.4 miles from Hastings, and Republican, 81.5 miles.

Cairo & Vincennes.—The connecting line between this road and the Danville & Southwestern is now completed. It is eight miles long, running from St. Francisville, Ill., northward to the southern terminus of the Danville & Southwestern at Lawrenceville. It completes a pretty direct line from Cairo to Chicago over this road, the Danville & Southwestern and the Chicago & Eastern Illinois, which is 383 miles long, 18 miles more than the Illinois Central line.

Canada Central Extension.—Engineer Brunel and party, who have been making a preliminary reconnaissance, report having found a practicable route by the north shore of Lake Nipissing for the proposed extension to the Sault Ste. Marie.

Champaign, Havana & Western.—The New York World says: "Mr. Sumner R. Stone, acting under a power of attorney given for the purpose, has sold to Messrs. Drexel, Morgan & Co. a majority of the mortgage income bonds and of the stock of the Champaign, Havana & Western Railroad Company, late the Indianapolis, Bloomington & Western Extension. The bonds are sold at par, and the stock at \$1 per share, payable and deliverable on the 30th inst. The contract of sale guarantees the same terms to the minority, in case they see reason to avail themselves of them at that date."

Chicago, Burlington & Quincy and Burlington & Missouri River in Nebraska Consolidation.—It is now announced that terms of consolidation between these two companies have been agreed upon. The Burlington & Missouri River stockholders are to receive stock of the consolidated company share for share for their present holdings, but, in order to equalize values, the Chicago, Burlington & Quincy will make, before the consolidation takes effect, a stock dividend of 20 per cent., and probably also a cash dividend of 1½ per cent, in addition to its regular quarterly dividends. The bonds and other obligations of both companies will remain unchanged, and will all be assumed by the consolidated company. The agreement has yet to be approved by the stockholders of both companies.

Chicago, Rock Island & Pacific.—The Atlantic & Southern Branch is now completed from Atlantic, Ia., southward to Lewis, eight miles, and work is progressing beyond that point. The grading is also well advanced on the branch from Avoca, Ia., to Macedonia.

Cincinnati, Hamilton & Dayton.—It will be remembered that the differences between this company and the bondholders of the Cincinnati, Hamilton & Indianapolis Company (whose stock is all owned and the road worked by this company) were referred to Messrs. Jacob D. Cox, M. E. Ingalls and Charles Francis Adams, Jr., as arbitrators. These arbitrators have now made a report in which they state that the Cincinnati, Hamilton & Dayton is in good condition and that the earnings of its lines are sufficient to pay all its interest and rental obligations, and have been sufficient to do so except in the year 1877. The arbitrators, therefore, suggest that the Cincinnati, Hamilton & Dayton Company agree to pay interest hereafter regularly as it becomes due, and that the Cincinnati, Hamilton & Indianapolis bondholders on their part agree to convert their unpaid coupons into preferred stock, on which dividends shall be paid whenever the net earnings of their road exceed the interest on the bonds. This award is said to be acceptable to all parties concerned.

Columbus, Findlay & Northwestern.—This company is organized to build a railroad from Columbus, O., northwest to Findlay and thence to Grand Haven, Mich., a distance of some 280 miles. The country along the proposed line in Ohio is to be canvassed for subscriptions.

Connecticut Valley.—Notice is given that a meeting of the first-mortgage bondholders will be held in Hartford, Conn., Feb. 3, to form, if they shall see fit, a new corporation for the purpose of holding and working the road. A majority in amount of the bonds must be represented in order to take action.

Bondholders are requested to deposit their bonds with the committee for registration. The bonds will be held in trust by the committee and certificates issued to the owners.

Denver & Rio Grande.—Charges have been made against this company of "eccentric financing," which are thus expressed by the Pueblo (Col.) *Chieftain*:

"The original capital stock of the Denver & Rio Grande Railway at its organization amounted to \$2,500,000. On the sixteenth day of June, 1871, it was increased by a vote of two-thirds of the stockholders to \$5,000,000, and a certificate to that effect filed with the Secretary of the territory on the 11th of April, 1876. On the 6th of May, 1876, the stock was in the same manner increased to \$7,000,000, and a certificate filed with the Secretary of State on the 20th of March, 1877. On the 23d day of May, 1877, the capital stock was again increased to \$8,500,000, and the proper certificate filed on the 31st day of May, 1877. These certificates, it must be borne in mind, are all sworn to by the Chairman and Secretary of each of the meetings of the stockholders, at which these various increases were made."

"At the regular annual meeting of the stockholders of the company, held on the last Friday of November, 1878, the Denver & Rio Grande Railroad was leased to the Atchison, Topeka & Santa Fe Company, and as part of the transaction 42,510 shares, or ten shares more than one-half of the capital stock of the Denver & Rio Grande Railway Company, were transferred to Mr. Coolidge, of Boston, acting for the Atchison, Topeka & Santa Fe. The meeting then adjourned, but re-assembled on Dec. 13, 1878, without any notice being given to Mr. Coolidge, and by a vote of 70,937½ shares of stock (mark the fraction) as per certificate, increased the capital stock to \$11,200,000 by the issue of 27,000 shares of additional stock. To obtain a vote of the number of shares above stated, some highly honorable and upright member of the board must have voted the shares transferred to Mr. Coolidge without that gentleman's knowledge or consent."

It is further charged that, to cover up these transactions, irregular certificates have been filed and transactions dated back, and that the affairs of the company have been carefully concealed from all outsiders.

Detroit & Pelican Valley.—This company has been or-

ganized to build a railroad from Detroit, Becker County, Minn., on the Northern Pacific, southward through the Pelican Valley to Fergus Falls on the St. Paul, Minneapolis & Manitoba, a distance of about 40 miles. A line to Breckenridge on the Red River of the North is also contemplated.

Evansville, Terre Haute & Chicago.—Chicago papers report that this road has been leased to the Chicago & Eastern Illinois Company, the rental to be interest on the funded debt. The road extends from Danville, Ill., the Southern terminus of the Chicago & Eastern Illinois, southward to Terre Haute, Ind., 55½ miles. By the last report the debt consisted of \$775,000 first, and \$325,000 second mortgage bonds, the interest on which is \$77,000 a year, making a rental of \$1,394 per mile. The net earnings of the road for five years past have exceeded the interest.

Fitchburg.—At the annual meeting in Boston, Jan. 27, the stockholders voted to approve the action of the directors in relation to a formation of a corporation to build grain elevators and wharves in Boston, and to authorize them to take such portion of the stock of said corporation for the Fitchburg Company as they may deem advisable. It was also resolved to authorize the directors to request the Vermont & Massachusetts Company (whose road is leased by this company) to sell the Brattleboro Branch of that road to the New London Northern Company upon such terms as may be agreed upon. This consent of the lessee was needed before the lessor company could make the sale.

Ft. Wayne & Jackson.—The following circular, dated Jan. 23, announces officially a change which has been already noted:

"The Ft. Wayne, Jackson & Saginaw Railroad has been sold and reorganized under the name of the Ft. Wayne & Jackson Railroad. The change will date as of the 1st of January. * *

"A separation of accounts as of the above date should be made, and all correspondence relating to the same may be with the new management."

Grand Trunk.—A dispatch from London, Jan. 26, to the *Toronto Globe* says: "Mr. Abbott, on behalf of his clients, has proposed to the directors of the Grand Trunk Railway Company to buy £2,500,000 ordinary stock, reserved since 1873, at the price of 90 per cent., payment to be made in June. The directors decline the offer."

Illinois Midland.—The offices and shops of this company have been moved from Paris, Ill., to Decatur.

Illinois Railroad and Warehouse Commission.—A dispatch from Springfield, Ill., Jan. 20, says:

"At a meeting of the Railroad and Warehouse Commissioners to-day, letters were read from Overholt Brothers, of Pana, and J. C. Noyes, General Freight Agent of the Indianapolis & St. Louis Railroad, relative to the proposed arbitration heretofore mentioned. Both parties are willing to have the board settle the matter. Two letters from Wm. Donahoe, of Troy, were read, in which complaint was made of unjust discrimination by the St. Louis, Vandalia & Terre Haute Railroad, said road charging from Troy to Indianapolis more than was charged from East St. Louis to Indianapolis, 20 miles further. The Commission signified its intention to look after the matter. A complaint was presented against the Chicago, Burlington & Quincy of extortion, by J. W. McIntosh, from time to time during the past six years. He was instructed to consult counsel about bringing suit to recover. A complaint is made to the commission by Charles Lynch that the Chicago & Alton Railroad failed to stop Kansas City trains at Carrollton, to put off and take on passengers. A copy was sent to General Manager McMullin, who replied that the matter would be corrected. The roads centering at Gibson City agree to stop discrimination in the future. A letter from P. L. Cable, President of the Rock Island Railway, was presented, asking that, in view of the stock cars in use on his road holding a greater weight in tonnage than those in use on other roads of its class, he be allowed to add to the present freight of the Commission. The Commission answers with the statement that he has the right to charge extra, but *pro rata* with the Commissioners' rates for all above 20,000 pounds, the same being the amount fixed by the Commission."

"Complaint was made by Thomas S. Ridgeway of Shawneetown, in the matter of overcharge against the Cairo & Vincennes Railroad in certain charges on tobacco shipment. It was ordered that the company be notified of the charge, with the request to examine and report the facts from their standpoint."

International & Great Northern.—A meeting of International and Houston & Great Northern second-mortgage bondholders was held in New York last week. By the plan of reorganization under which the mortgages were foreclosed and the road sold, the first-mortgage bondholders were to take possession of the roads and to transfer to the second-mortgage bondholders certain lands, town bonds, etc., in exchange for their bonds. This was agreed to by the latter, and a committee was appointed to arrange the transfer. At the meeting the committee reported that they had received all the warrants and securities, and they advised the organization of a new company, to be known as the New York & Texas Land Company, for the purpose of disposing of the land and securities; the new company to issue stock to the bondholders in proportion to the amount held by each. The report was adopted and the committee instructed to take the necessary legal steps to organize the company as stated. At the meeting, \$4,000,000 out of the \$5,000,000 of the second-mortgage bonds outstanding were represented.

Messrs. J. S. Kennedy & Co. now advertise that the Purchasing Committee appointed under the agreement of Sept. 20, 1878, for the reorganization of this company, desire to dispose of \$600,000 of the first-mortgage 6 per cent. gold bonds provided to be issued under said agreement. The bonds are secured by a purchase-money mortgage; are dated Nov. 1, 1879, and have 40 years to run from that date; interest and principal are payable in gold coin. The total issue of these bonds is \$5,624,000 on 519 miles of completed railroad, and further issues are limited to \$10,000 per mile and only on completed railroad. Sealed proposals will be received at the office of J. S. Kennedy & Co., No. 63 William street, New York, until Jan. 31, at noon.

Kansas Pacific.—A suit is pending in the New York Supreme Court, the decision in which will determine the validity of 10,000 shares of stock held by Ephraim Williams, and 103,000 shares held by the estate of Henry W. Dakin. This stock was originally owned by Samuel Hallett and Gen. John C. Fremont, and the company refuses to consider it genuine, claiming that it was issued without consideration, and further that, even if it had been properly issued, it is now valueless, having been forfeited by failure to pay assessments made.

Lake Shore & Shenango Valley.—This company has been organized to build a railroad from Conneaut, O., southward to Vernon Centre on the Atlantic & Great Western. The distance is about 40 miles; the line is parallel to and two or three miles west of the boundary line between Ohio and Pennsylvania.

Louisville & Nashville.—Louisville dispatches state that a conference is in progress there in relation to the future management of the Nashville, Chattanooga & St. Louis lines, now controlled by this company. It is understood that Col. Cole will be asked to retain his position as President of the Chattanooga Company. It is said that the question of approving the lease of the Central of Georgia will be decided; also as to the completion of the Evansville, Owensboro & Nashville road, with many minor matters relating to the joint working of the two systems.

Louisville, Cincinnati & Lexington.—This company has been advertising for proposals for the completion of the leased Cumberland & Ohio, Northern Division, from Shelbyville, Ky., to Bloomfield.

It is reported that negotiations are in progress for a lease of the road to the Louisville & Nashville and the Pennsylvania Company, the two companies to hold and work the road on joint account, and to guarantee the bonds and pay 4 per cent. dividends on the stock. Nothing definite has been given out as yet.

Missouri, Kansas & Texas.—A majority of the directors of this company have resigned and their places have been filled by Jay Gould and other persons connected with him, indicating that he controls a majority of the stock. It is said that the new board will at once make some arrangement with the bondholders by which the management of the road may be restored to the company, though no definite plan has yet been proposed. Until such an arrangement is made, the Union Trust Company will continue to work the road as trustee in possession under the agreement with the bondholders.

Montreal & Champlain Junction.—This company has been organized to build a new road from Montreal southward to the New York line. It is in the interest of the Grand Trunk.

New London Northern.—This company asks authority from the Connecticut Legislature to issue \$1,000,000 new 8 per cent. bonds, of which \$300,000 are to be used to replace the same amount of old bonds, and \$700,000 for the purchase of the Vermont & Massachusetts branch from Miller's Falls to Brattleboro.

New York & Oswego Midland.—The purchasers of this road at the recent sale have organized a new company, to be known as the New York, Ontario & Western. As already noted, it will have but a light bonded debt, issued to pay for the expenses of reconstruction. The Receiver's certificates will be represented by preferred stock, and the first-mortgage bonds by common stock, while certain other securities are entitled to come in upon payment of a proportion of the expenses of foreclosure.

New York Central & Hudson River.—The following is the only official notice given of the result of the bids for the 250,000 shares of stock offered for sale last week by the syndicate:

"The bids for the New York Central & Hudson River Railroad stock were opened this afternoon by the New York committee at the office of Drexel, Morgan & Co. The committee, after receiving advices from London, where the subscriptions also closed this afternoon, disposed of 200,000 shares. Prices ranged from 131 to 135 here."

It is not stated how much of the stock was taken in New York, or what proportion of it will go to London.

New York, Connecticut & Eastern.—This company has been organized to build so much of the projected new road from New Haven to New York as may be between the Connecticut state line and New York city. It is auxiliary to the Connecticut company of the same name.

Norwich & Worcester.—At the annual meeting in Worcester, Mass., last week a resolution was adopted providing "that the question of the modification of the lease of the road to the New York & New England Railroad Company be referred to the Board of Directors, to report at a future meeting of the stockholders what change, if any, should be made in the terms of the lease."

The general feeling expressed at the meeting was strongly against any reduction in the rental of the road, which is now interest on the bonds and 10 per cent. on the stock.

Ogdensburg & Lake Champlain.—The Boston *Advertiser* says: "The report that this company has sold \$1,000,000 of bonds in the New York market, which will supply means for extensive improvements, has before been noticed. A plan is now under consideration to convert the preferred stock and back interest, now amounting to 190 per cent., into a mortgage 6 per cent. bond for 70 per cent. of this amount, and the 50 per cent. balance into an income bond."

Philadelphia & Reading.—This company's statement is as follows for December, the first month of its fiscal year:

Gross earnings:	1879.	1878.
Railroad traffic	\$1,325,780	\$810,801
Canal traffic	31,511	10,357
Steam colliers	68,937	46,029
Richmond barges	16,359	14,379
Total Railroad Co.	\$1,442,587	\$881,656
Coal & Iron Co.	800,016	576,041
Total	\$2,248,603	\$1,458,297
Traffic:		
Passengers carried	716,503	475,604
Tons merchandise	496,537	238,117
Tons coal	653,190	373,170
Tons coal on colliers	44,588	43,902
Tons coal mined:		
By Coal & Iron Co.	316,045	214,046
By tenants	111,584	57,085
Total	427,629	271,731

Suit has been begun to recover about \$168,000 from the company as tax upon the wages-crip issued by it. This generally passed from hand to hand as currency, and it is claimed by the United States revenue officers that it comes within the law imposing a tax of 10 per cent. upon all circulating notes other than those of national banks. The company's engines at Port Richmond have been attached and the suit to recover will be prosecuted vigorously.

Pennsylvania.—This company's report for December shows, in comparison with December, 1878, for all lines east of Pittsburgh and Erie:

An increase in gross earnings of	\$848,629
An increase in expenses of	268,509
Net increase	\$580,120

For the twelve months ending Dec. 31 the same lines show, as compared with the same period in 1878:

An increase in gross earnings of	\$2,083,544
An increase in expenses of	1,913,740
Net increase	\$1,069,798

For the twelve months all lines west of Pittsburgh show a surplus over all liabilities of \$1,526,817, being a gain of \$1,082,836 over the same period in 1878.

The *North American* says: "The plans for the Filbert

